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PREFACE

We are pleased to present **Volume 16, Number 2 (July 2026)** of *Soshum: Jurnal Sosial dan Humaniora*. This issue continues our commitment to disseminating high-quality scholarly works that contribute to the advancement of knowledge in the fields of social sciences and humanities. As an open-access journal published by the Unit Publikasi Ilmiah, Pusat Penelitian dan Pengabdian kepada Masyarakat, Politeknik Negeri Bali, *SOSHUM* provides a platform for researchers, academics, and practitioners to share innovative ideas, empirical findings, and critical perspectives on contemporary social and humanistic issues.

The articles published in this issue reflect the interdisciplinary nature of the journal, encompassing diverse topics such as education, language and literature, communication, culture, tourism, media studies, philosophy, religion, and other areas within the social sciences and humanities. Through rigorous peer-review and editorial processes, we strive to ensure that every published article meets high academic and ethical standards while offering meaningful contributions to both theory and practice.

We sincerely appreciate the valuable contributions of all authors who entrusted their research to *SOSHUM*. Our deepest gratitude also goes to the reviewers and members of the editorial team for their dedication, professionalism, and commitment throughout the editorial process. Their efforts have been instrumental in maintaining the quality and integrity of the journal.

We hope that the articles presented in this issue will serve as useful references for researchers, educators, students, policymakers, and practitioners, while inspiring further studies and interdisciplinary collaboration in addressing contemporary challenges in society.

Finally, we welcome constructive feedback and invite researchers from around the world to submit their original manuscripts for future issues of *Soshum: Jurnal Sosial dan Humaniora*. We remain committed to continuously improving the quality and international visibility of the journal.

July 2026

Editor-in-Chief

Soshum: Jurnal Sosial dan Humaniora

TABLE OF CONTENTS

No.	Title	Pages
1	The Lotus Flower and White Frangipani: Cosmological Meaning and Esthetic Practices in Balinese Hindu Rites	93–104
2	Revitalisation of the Symbolism of the Altar (Batu Dolu) in the Socio-Historical Local Wisdom of the Alor Tribal Community	105–112
3	Forests, Lived Relations, and Dance Creation in Papua	113–125
4	Analysis of Posyandu Advisory Team Role in Preparing Six Minimum Service Standards Transformation	126–135
5	Urgency of Developing New Regulatory Norms on Subsurface Ownership and Vertical Depth Boundaries in the National Agrarian Law System	136–144
6	Startup Experience Trip in Strengthening Social Capital and Empowering the Economy of Partner Village	145–155
7	Analyzing Mythological Constructions in Ring Advertisements Using Barthes' Framework	156–164
8	The Role of Artificial Intelligence (AI) in Early Childhood Education Learning Evaluation	165–169
9	Development Integrating Augmented Reality, Artificial Intelligence, and Graphic Design to Enhance Learning Quality in Higher Education	170–178
10	An Ecofeminist Analysis of the Lyrics of Colours of the Wind in Disney's Pocahontas (1995)	179–187

The Lotus Flower and White Frangipani: Cosmological Meaning and Aesthetic Practices in Balinese Hindu Rites

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ABSTRACT

Flowers are central to Balinese Hindu ritual practice, but previous studies have interpreted them mainly as ritual ornaments, symbolic offerings, or aesthetic complements to ceremonial performance. Much less scholarly attention has been paid to their role as embodied aesthetic media at the intersection of sensory perception, religious experience, and cultural meaning. This study addresses that gap by investigating flowers as integrative media in Balinese Hindu ritual, linking materiality, symbolism, ethics, and spirituality. It adopts a qualitative ethnographic approach based on field observations, in-depth interviews with Hindu priests and ritual practitioners, and textual analysis of the *Agastya Parwa*. The analysis is also informed by Hindu Aesthetics (Triguna, 2025), symbolic anthropology, and ritual studies. The results show that flowers are not merely aesthetic objects but ritual media embodied in four interrelated dimensions: material, ethical, symbolic-cosmological, and spiritual. Together, these dimensions transform sensory experience into sacred experience. The study reveals the distinctive symbolic roles of ritual flowers, including the lotus (*tunjung*) as a cosmological symbol of purity and cosmic order, and the white frangipani (*Plumeria alba*) as an aesthetic conduit of everyday devotion and cultural continuity. Based on these findings, this article proposes the Balinese Hindu Ritual Aesthetics Model, which approaches ritual aesthetics as a holistic religious experience constructed through the interaction of material objects, embodied practice, symbolic meaning, and spiritual consciousness. This model contributes to debates in the anthropology of religion, material religion, ritual studies, and embodied aesthetics by showing that flowers are shared cultural media through which religious values, cultural memory, and cultural resilience are continually reproduced in Balinese Hindu society.

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INTRODUCTION

Hindu rituals in Bali are cultural practices with important implications for art and aesthetics. Above all, religious rituals are artistic performances involving patterned visual designs, objects, colours, scents, and bodily techniques (Schechner, 2013; Kapferer, 2004; Bell, 1997). From this perspective, flowers play a crucial role as an aesthetic form of mediation between sensory perception and symbolic meaning. As the anthropologist Clifford Geertz explains, religious systems operate through symbols that construct an atmosphere of feeling and an orientation of significance within social practice (Geertz, 1973).

Within *Tri Hita Karana*, meaning the Three Causes of Well-being, flowers (*sekar*) are valued not only for their decorative or offering (*banten*) functions but also as living symbolic materials that embody sanctity, beauty, and impermanence. Their fragrance, colour, and fragility make them especially suited to conveying devotion in an immediate yet transient form. This understanding is consistent with symbolic anthropology, which views ritual materials as instruments of meaning-making and transformation through sensory experience and social action (Turner, 1967; Morgan, 2010; Plate, 2014; Meyer, 2012).

Nevertheless, analyses of Balinese art and ritual have often treated flowers primarily as decorative or technical devices, with insufficient attention to their role as a sensory and visual language within ritual (Pink, 2011; Howes, 2014). Research on Balinese performing arts and rituals indicates that the aesthetic materials of ritual performance, including natural substances, intensify feeling, create a sacred ambience, and cultivate *taksu* (spiritual power) within ceremonies (Bandem, 2001; Dibia, 2012). In this light, flowers should be understood as part of the ecology of ritual aesthetics rather than as mere additions.

This article proceeds from the premise that flowers in Balinese Hinduism span two intertwined worlds: cosmology and everyday lived practice. The lotus symbolises pure and sacred creation, while the *mandala* visualises the universe and is therefore associated with harmony and prosperity. In everyday life, the white frangipani represents an accessible form of devotion that is repeatedly enacted in household prayers and modest offerings. Together, these flowers illustrate the range of Balinese ritual aesthetics, from elevated cosmological symbolism to grounded and repetitive devotional practice.

The *Agastya Parwa* palm-leaf manuscript is also consulted to illuminate the ethical and aesthetic qualities of flower offerings. The relevant passage is interpreted not as a prescriptive code but as a set of values establishing standards for incense offerings and flowers: freshness, fragrance, wholeness, and respectful gathering. This interpretation aligns with the material religion approach, which emphasises how religious experience is mediated through the body, the senses, and ritual materiality (Meyer, 2011).

Focusing on the *tunjung* and white frangipani, this article develops an aesthetic argument demonstrating how Balinese Hindu flower rituals mediate between cosmological order and everyday devotional practice. Through symbolic and material readings, the study contributes to discussions of Balinese ritual art by interpreting natural elements as integral to communal aesthetic experience and spiritual aspiration. This artistic dimension has deep historical roots in Balinese culture.

Within this framework, the article situates flowers as aesthetic media in Balinese Hindu religious practice, focusing specifically on the lotus and white frangipani in relation to cosmological symbolism and everyday devotional practices.

METHODS

This research adopts a qualitative descriptive approach (Charles Teddlie, 2009), guided by an ethnographic-interpretive tradition, to explore flowers as elements within the aesthetic ritual complex of Balinese Hindu ceremonies (Geertz, 1973; Hammersley, M., & Atkinson, 2007; Pink, 2015). This approach was selected because it is well suited to examining the symbolic, sensory, and social dimensions of flower use in everyday ceremonies and devotional practices, which cannot be adequately reduced to numerical measures (Creswell, 2014; Denzin, N. K., & Lincoln, 2018).

Data were gathered through participant observation, semi-structured interviews, textual study, and documentary sources. Household prayer practices and several communal ritual contexts were observed through participant observation, with attention to the presence of offerings, the types and arrangements of flowers, and the aesthetic experiences involved. Informants included *banten* specialists, temple priests or *sulinggih*, and ritual practitioners directly involved in selecting flowers for offerings. They provided information about local knowledge, aesthetics, and the ethics of offerings (Spradley, 1980).

The textual source is the *Agastya Parwa*, a palm-leaf manuscript translated into Sumatran Malay by Sura (2002). It is read as a moral text concerning floral offerings and aesthetic qualities such as freshness, fragrance, wholeness, and a respectful attitude towards gathering flowers. This textual reading is placed in dialogue with fieldwork to explore how textual norms intersect with practice. The research was also grounded in an extensive literature review of Balinese ritual art and symbolic anthropology (Meyer, 2011; Turner, 1967), providing a robust analytical framework and scholarly positioning.

Data were analysed inductively and thematically by reading fieldwork and textual sources as mutually illuminating clusters of meaning. The analysis addressed the cosmological meaning of *tunjung*, the everyday aesthetics of white frangipani, the sensory qualities of flowers, including colour and fragrance, and the ethics of selecting and gathering flowers. These themes were examined through dialogue between symbolic functions and material-sensory dimensions.

Source and method triangulation, together with limited validation by informants on sensitive or contextual matters, was undertaken to ensure the credibility of the findings (Creswell, 2014).

This perspective views flowers not merely as ritual elements but as active aesthetic materials that shape sacred experience and devotional practice in Balinese Hindu rituals.

RESULTS

Flowers and the origins of Balinese Hindu ritual aesthetics

Field research shows that ritual aesthetics in the Balinese Hindu tradition extend beyond visual beauty. Aesthetics is a lived experience involving the body, the senses, emotions, and spiritual consciousness simultaneously. As discussed in Hindu Aesthetics (Triguna, 2025), aesthetic experience is built upon aisthesis, the human capacity to perceive and experience the world through the senses. Human beings encounter reality through colours, smells, textures, rhythms, and emotional atmospheres before conceptual understanding. Aesthetic experience is therefore a fundamental mode through which human beings relate existentially to the world and to sacred reality.

In Balinese Hindu ritual, however, aesthetic experience conceived in this way extends well beyond mere sensory perception. This is evident in the religious norms governing the appropriateness of ritual offerings. One important textual source that explicitly states that not all flowers may be offered to *Hyang Widhi* is the *Agastya Parwa* (Sura, 2005). It prohibits flowers that are infested with worms, have fallen naturally rather than been picked, are covered with ants, are withered or past their prime, or grow in cemeteries. Flowers used for worship must instead be fresh, clean, and intact, making them worthy symbols of *bhakti* (devotional reverence) (Putu Budiadnya & Komang Prayogi, 2022).

These prescriptions indicate that a flower's aesthetic quality is inseparable from its ethical and spiritual qualities. Freshness is not merely a visual attribute but an indicator of sincerity (*śraddhā*) and the purity of the offering. Fragrance is not simply a source of sensory pleasure; it creates an atmosphere of inner peace that enables devotees to enter more deeply into religious experience. Thus, the ritual aesthetics of Balinese Hinduism embodies an ethic of giving: the finest materials are offered as a tribute to God.

Field observations show that these principles remain well preserved in contemporary Balinese society. Before preparing *canang* or *banten* offerings, ritual practitioners meticulously examine each flower. Blossoms that are stale, damaged, or withered are not used and are discarded. This practice is understood not merely as a technical procedure but as a religious discipline passed down from generation to generation as an integral part of Balinese Hindu cultural tradition.



Picture 1. White Frangipani (*Plumeria alba*) flowers used in offerings in Balinese Hinduism

These observations are further supported by an interview with Ida Bagus Candra (49), a *walaka* (Balinese Hindu religious practitioner) from Griya Buruan, Tabanan:

"The flowers used for offerings in the rituals should be fresh and not withered. They are even better when they are scented and come in a variety of colours such as white, red, yellow, black and others" (Interview, 3rd Oct, 2025).

To explain the importance of providing fresh and fragrant flowers, he offered the following analogy:

"God is pure so our gifts should be pure, fresh and if possible fragrant. It can improve the inner disposition and bring the heart closer to Ida Sang Hyang Widhi."

This study shows that the aesthetic performance of Balinese Hindu ritual occurs at the intersection of sensory experience, ethical norms, and symbolic meaning. As argued in Hindu Aesthetics (Triguna, 2025), aesthetic experience involves more than viewing beautiful objects. It is a quality of experience in which perception, emotion, action, and reflection are integrated into a coherent framework of meaning. Within ritual practice, flowers function as beautiful media that connect the devotee's body, consciousness, and spiritual experience.

The qualities required of flowers used in rituals, as described in the Agastya Parwa, also demonstrate that, from the perspective of symbolic anthropology, symbols are never merely material objects. Cultural practices are collectively performed, interpreted, and transmitted, and their symbolic significance is produced through these processes. Thus, a flower in Balinese Hindu ritual is not simply an aesthetic object but a living symbol that connects human beings with cosmic order through conscious, sincere, and reverential acts of offering. This aligns with Hindu Aesthetics, which holds that human beings perceive the world not only through the body but also through symbols. Ritual beauty is therefore an experience that integrates sensory perception, cultural values, and spiritual consciousness into a unified religious experience.

The ritual flower is not a sign that points to something beyond itself but a symbol that mediates the sacred reality of religious experience. Symbols are mediating structures between the empirical world and the world of meaning (Triguna, 2025). Thus symbols call to mind the collective consciousness, preserve cultural values and turn the everyday human experience into religious experience. The selection of flowers in Balinese Hindu ritual, therefore, is not to be understood as a question of visual aestheticism, but as a symbolic mechanism for human beings to get into contact with the cosmic order and the Divine.

The study summarises these findings by arguing that the suitability of flowers as ritual offerings in the Balinese Hindu tradition depends not only on their biological properties as plants but on the intersection of three interrelated dimensions: material quality, ethical quality, and aesthetic-spiritual quality. Flowers are valued for their freshness, wholeness, fragrance, and purity. Their ethical quality is expressed through respectful and sincere selection, handling, and presentation. Their aesthetic-spiritual quality is manifested in their capacity to generate an experience of sacredness that engages both the senses and the religious consciousness of worshippers. Within this conceptual framework, the normative criteria for flowers appropriate for ritual offerings are described in the Agastya Parwa, while Hindu Aesthetics (Triguna, 2025) explains how these material qualities are transformed into aesthetic and spiritual experience. The ethnography presented in this study shows how these principles are embodied, transmitted, and reproduced in the ritual practices of Balinese Hindu communities. Flowers in Balinese Hindu ritual therefore cannot be reduced to decoration or religious symbols alone; they are aesthetic media through which religious norms, sensory experience, ritual action, and cultural continuity are integrated into a living religious experience.

***Tunjung* as a Cosmological Symbol in Balinese Hindu Ritual Aesthetics**

Field observations reveal that the *tunjung* flower (*Nelumbo nucifera*; lotus) occupies a highly distinguished position within the ritual tradition of Balinese Hinduism. Compared with other ritual flowers, *tunjung* is valued not only for the elegance of its form and colour but also for the profound symbolic meanings associated with it. In temple ceremonies as well as rituals concerned with purification, the lotus is frequently placed at specific locations within the *banten* (ritual offering) that function as symbolic centres of ritual orientation. Its presence evokes an atmosphere of serenity, majesty, and sacredness, making it one of the most recognizable aesthetic elements in Balinese Hindu ritual practice.



Picture 2. *Tunjung* (Lotus) as a Sacred Medium in Priestly Worship in Bali

This is corroborated by the reports of ritual specialists who see the lotus as the archetypal symbol of purity because it grows from the muddy waters bearing a flower of exquisite beauty and impeccable cleanliness. The natural quality, informants said, symbolised man's ability to cultivate spiritual purity in the midst of worldly impurity and adversity. The use of *tunjung* in ritual offerings is not simply a matter of adhering to tradition, but it also carries a moral and spiritual message of cultivating purity of thought, speech and action.

The *tunjung* (lotus) flower is also often found in *banten pancalingga* in *melaspas* (ritual consecration) and *ngenteg linggih* (temple enthronement) ceremonies. Similarly it also forms part of the ritual of *atma wedana* (post-cremation purification) and the *pengentasan jiwa* (soul liberation) ceremony, which is performed in different forms of *padudusan* and other major Balinese Hindu ritual observances. These ritual contexts indicate that the lotus is appreciated not only for its aesthetics but also for its deep theological and cosmological significance in the ritual tradition of Balinese Hinduism (Interview with Ida Bagus Candra, 3 October 2025).

This is also seen in an interview with Ida Ayu Mirah (72), a well-known *tukang banten* (ritual offering specialist) from Griya Jambe, Tabanan:

"The most exalted, the most pure flower is the lotus (tunjung) or astadala. But the blossom itself, though it grows in the mire, is pure. This is the reason why the lotus flower is used in Nyurya Sewana ritual performed by Ida Pedanda." (Interview, 5 October 2025)

The Agastya Parwa has long been the textual basis for the reverence accorded to flowers as ritual offerings. The flowers offered to the Divine should be pure, fresh and offered according to the ritual signifying the highest reverence of the devotee to God. Therefore, the selection of *tunjung* is not only based on aesthetic consideration, but also based on the religious principle that the material of the best quality should be used in the offering in *bhakti* (devotional worship). This tradition is still faithfully preserved by the Balinese society who only chooses fresh and flawless lotus flowers for the needs of rituals.

The Aesthetic Experience of the lotus is not only about the appreciation of its visual form, but also about the Hindu Aesthetics (Triguna, 2025). Aesthetic experience is conceived as a mode of lived experience that arises from the integrated participation of body, senses, emotions and spiritual consciousness. Thus the beauty of the flower is not separate from religious experience itself but a way in which the devotee can meaningfully engage sensually with sacred reality. So in the ritual offerings, when the worshippers reflect on the lotus, they are not merely appreciating the physical beauty but a spiritual experience through the ritual symbolism.

Hindu Aesthetics expands this view further by stating that the body is the principal vehicle of aesthetic experience. Beauty is not an object for abstract intellectual contemplation but an object for immediate bodily participation in ritual life. The aesthetic experiences that constitute religious consciousness are the ritual activity of making *banten*, the aroma of the flowers, the tactile experience of selecting the best petals, and the silence that surrounds the space during prayer.

The significance of *tunjung*, then, does not lie in the flower but in the sacred experience created by the dynamic interaction of human beings, ritual symbols and religious practice.

The study's findings also suggest that the *tunjung*'s symbolism has a deep cosmological meaning. In Hindu iconography the lotus is the divine seat of the gods and symbolises the birth of life from the primordial cosmic source. The lotus that grows in water and mud does not get stained by mud and water. It is a sign, therefore, of our ability to convert this worldly existence into spiritual purity. Cosmological symbolism continues to be reproduced in Balinese ritual practice, so that its sacred meanings are embedded in everyday religious life.

From the point of view of symbolic anthropology, the *tunjung* is an instance of a multivocal symbol, as Victor Turner (1967) describes it, a symbol that carries religious, moral, aesthetic and cosmological meanings at the same time. It is not only the medium between human being and the Divine, but also creates a collective consciousness of the cosmic order that sustains the Balinese Hindu way of life. According to Geertz (1973), the lotus is a web of significance, which the society uses to give meaning to reality through inherited cultural symbols. This interpretation is the basis for Triguna (2025) to say that *tunjung* is a multilevel symbol, which contains cosmological, religious, ethical and aesthetic dimensions at the same time. The symbols are not just about conveying meaning; they are actively involved in shaping the way communities experience reality and organise relations between human beings, nature and the Divine.

These findings lead this study to suggest that the *tunjung* flower in Balinese Hindu ritual is not merely an aesthetic ornament or ritual accessory, but a cosmological symbol that can turn aesthetic appreciation into an experience of sacredness. This transformation is achieved through the interrelation of three interdependent dimensions, i.e. religious norms stated in the Agastya Parwa, the aesthetic experience embodied in Hindu Aesthetics (Triguna, 2025), and the cultural practices that are continuously reproduced in the Balinese Hindu society. Consequently, *tunjung* does more than beautify ritual performance; it mediates the relationship between human beings and the cosmic order by fostering symbolic experiences that engage the senses, emotions, and spiritual consciousness simultaneously.

The Aesthetics of Devotion in Everyday Life: White Frangipani (*Plumeria alba*)

In almost all acts of daily worship of the Balinese Hindu, the white frangipani (*Plumeria alba*) is seen, whereas the *tunjung* (lotus) is mostly linked to major ceremonial events and has considerable cosmological meaning. Field studies suggest that frangipani trees are virtually always located in the compounds of households, family temples, and communal areas of *desa adat* (customary villages). They not only enhance the beauty of the surrounding environment, they are also a source of easily accessible flowers that are picked daily for ritual offerings. This situation shows that the white frangipani is much more than an ornamental plant, it has become part of the religious life of Balinese Hindu communities.

Another example of how symbols are not only powerful because of extraordinary ceremonial events, but also gain their potency through constant repetition in everyday life, is the use of white frangipani as part of everyday life. As argued by Triguna (2025), the cultural symbols continue to exist through the continuous reproduction of meaning in the social practice and thus become part of the collective memory of a community. So how are religious symbols maintained through routine devotional practice not just extraordinary ritual moments? Indeed, the white frangipani is a constant in daily worship.



Picture 3. White Frangipani (*Plumeria alba*) in a Balinese House Compound

Before the sun had risen high enough to light up the landscape, field observations recorded women carefully collecting white frangipani blossoms early in the morning. The flowers chosen were typically those that had recently opened, fresh, unspoiled and not fallen to the ground. Immediately after being picked, the flowers were arranged into *canang sari* together with other ritual materials. Although this activity appears simple, its daily repetition establishes a rhythm of religious life that has become inseparable from the everyday experience of Balinese Hindu families.



Picture 4. A Young Man Gathering White Frangipani (*Plumeria alba*) for Canang Sari

Interviews with informants revealed that white frangipani is chosen not merely because of its abundance and accessibility but because its white colour symbolises purity, sincerity, and clarity of heart when approaching *Ida Sang Hyang Widhi Wasa*. Its subtle fragrance creates a tranquil atmosphere conducive to focused prayer. For most informants, the flower is not simply a component of the ritual offering but an intrinsic part of spiritual experience transmitted from childhood through the religious traditions of family and community.

These results show that the religious experience of Balinese Hindus is mainly constructed from simple acts that are performed regularly in everyday life. However, from the point of view of the Agastya Parwa, the use of flowers in the ritual is not only a ritual obligation, but an expression of reverence toward the Divine by offering flowers that are clean, fresh and ritually appropriate. Thus, the practice of choosing freshly bloomed white frangipani provides an example of how scriptural injunctions continue to influence religious practice, even when they are not consciously articulated by those who worship.

In the framework of Hindu Aesthetics (Triguna, 2025), the practice serves as another illustration of the fact that aesthetic experience is born from the holistic engagement of body, perception and lived experience. Beauty is not confined to the appreciation of aesthetically pleasing objects but becomes an existential experience through which individuals encounter the world by means of colour, fragrance, touch, and emotional atmosphere. Within daily worship, the white frangipani generates precisely such an aesthetic experience. The new flowers, with their delicate fragrance and pure white colour all serve to create a devotional mood and prepare the faithful for prayer and meditation. The continued practice of this ritual also shows the role of ritual as a means of cultural transmission. Ritual is a cultural institution that maintains and

reproduces values by symbolic repetition, thus enabling communities to maintain their cultural identity in the midst of continuous social change (Triguna, 2025).

Hindu Aesthetics takes this further, suggesting that the aesthetic experience is intrinsically embodied, arising from the body's active involvement with the world. The collection of flowers, the arrangement of *canang sari*, the offering and the joint prayer are a series of bodily practices that transform ordinary daily activities into a sacred experience. Consequently, the white frangipani should not be regarded merely as an aesthetically pleasing object but as a medium through which the body, the senses, and religious consciousness converge within a unified experience of the sacred.

The ethnographic evidence also shows that the symbolic power of the white frangipani is in its repeated perpetuation. It is not used as ceremonial flowers but it forms part of the daily devotional life of Balinese Hindus. Such repetition produces what Clifford Geertz (1973) calls webs of significance, networks of cultural meaning that are continually reproduced through symbolic practice. At the same time, from the perspective of Victor Turner (1967), these repeated devotional acts can be read as forms of social drama which constantly re-create communal solidarity through simple but deeply meaningful ritual symbols.

The white frangipani is unique in its simplicity, and this simplicity suggests that Hindu aesthetics is not based on material extravagance but on the capacity of humble symbols to evoke profound religious experience. The flower's beauty cannot be separated from the devotee's sincerity who offers it. The aesthetic value is not assessed by rarity or magnificence but by the ability of the flower to mediate between the human being and spiritual consciousness.

To summarise, this study reveals that the white frangipani is a devotional aesthetic symbol which transforms the banal activity into religious experience through the continuous performance of ritual offering. The normative basis governing the fitness of flowers for ritual offerings is provided in this regard by the Agastya Parwa. The transformation of sensory perception to aesthetic and spiritual experience is described by Triguna (2025) Hindu Aesthetics. The ethnographic findings also show that the practices of collecting, choosing, arranging and offering white frangipani are mechanisms through which religious values are transmitted and the continuity of Balinese Hindu tradition is maintained. Therefore, the white frangipani should be seen not merely as a ritual flower, but also as a cultural medium that involves embodiment, aesthetic experience, devotional practice and cultural resilience in the everyday religious life of the Balinese Hindu society.

A Model of Balinese Hindu Ritual Aesthetics Materiality, Symbolism, and Sacred Experience

The result of this research suggests that the use of flowers in Balinese Hindu ritual cannot be explained sufficiently from one analytical perspective, whether it is aesthetic, symbolic, or theological. However, the ethnographic evidence reveals that Balinese Hindus perceive flowers as multi-dimensional cultural media that combine material qualities, religious norms, symbolic meanings and spiritual experience into a coherent ritual system. Within this framework, flowers act not only as decorative elements of ceremonial practice but as mediating agents, transforming the ordinary human experience into sacred experience through acts of ritual offering.

Field observations repeatedly show that flowers are carefully selected, both in terms of aesthetic sensitivity and religious consciousness, before they are offered in rituals. Worshipers check the flowers for freshness, integrity, colour, fragrance and cleanliness. These seemingly mundane actions contain a body of religious knowledge, transmitted through the generations by cultural practice. In ritual life, aesthetic judgement is inseparable from ethical responsibility, as informants repeatedly stressed that the flowers offered to *Ida Sang Hyang Widhi Wasa* should be the best possible expression of devotion. This view is in agreement with Triguna's (2025) idea of ritual as a tool of cultural resilience. Through ritual, cultural symbols are reproduced, reinterpreted and handed down from one generation to the next in continuous succession, enabling their meaning to be maintained even as society, the economy and technology continue to change. In this study, flowers function both as ritual offerings and as cultural media that reproduce collective memory and continually reaffirm the enduring relationships among human beings, nature, ancestors, and the Divine. This is supported by an interview with university lecturer and experienced *banten* practitioner I Gusti Ayu Artatik (58) who said: "*White frangipani is the most common flower in Balinese Hindu communities. It is used in everyday worship*

because it is widely planted in household compounds and its white colour symbolizes purity. Consequently, the first flower offered during prayer is usually the white flower, presented to Bhatarata Surya as the divine witness to worship." The interview and field observations confirm that white frangipani continues to be the most commonly used flower in everyday Balinese Hindu worship, demonstrating how symbolic meaning is continuously maintained through ordinary religious practice rather than through exceptional ceremonial occasions alone.

Normatively, the legitimacy of these ritual practices is derived from the Agastya Parwa which states that the flowers used in offerings must be pure, fresh and ritually correct. These prescriptions suggest that Hindu ritual aesthetics has always been rooted in an ethics of offering. Beauty is not considered as an end in itself, but it is an expression of reverence, sincerity (*śraddhā*) and inner purity in devotional worship. As such, the material properties of flowers are perceived as external expressions of the devotee's moral disposition.

This perspective is further elaborated in Hindu Aesthetics (Triguna, 2025) which argues that aesthetic experience originates in aesthesis, the human capacity to encounter the world through embodied sensory perception. Hence aesthetics is not a theory of beauty but a philosophical study of how humans experience being through perception, emotion, symbolism, and action. In Balinese Hindu ritual, this experience manifests itself in the colours and scents of flowers, their haptic qualities, the bodily movements entailed in arranging offerings, the ambience of ritual performance and the contemplative attitude developed during prayer. Thus, beauty is not only in the flowers, but also in the religious experience created through the interaction of human beings, ritual symbols, and sacred reality.

Moreover, Hindu Aesthetics conceives of the body as the primary medium in which aesthetic experience is constituted. Beauty is not generated by disengaged intellectual contemplation, but by active bodily participation in ritual practice. Collecting flowers, choosing those considered ritually suitable, arranging the *canang sari*, making offerings and saying prayers together are a series of embodied actions that transform mundane life into a sacred experience. Ritual thus becomes a space where body, symbol, community, and cosmos converge, allowing aesthetic experience to achieve its fullest religious significance.



Figure 5. White Frangipani (*Plumeria alba*) for *Canang Sari*

Flowers are also, from the perspective of symbolic anthropology, multivocal symbols, as suggested by Turner (1967). One flower has biological, aesthetic, ethical, religious, social and cosmological meanings at the same time. The lotus (*tunjung*), symbolising purity and cosmic order, and the white frangipani (*jepun putih*), symbolising the simplicity of everyday devotion, these symbolic forms do not exist in isolation but rather form interlinked webs of meaning (Geertz, 1973) which are continually reproduced through ritual practice. The flowers are therefore not just symbolic objects but means for the transmission of religious knowledge and cultural memory from one generation to another.

The ethnographic findings also show that Balinese Hindu ritual aesthetics cannot be reduced to visual beauty alone. Rather, the beauty of ritual is a fundamentally multisensory one, involving sight through colour, smell through fragrance, touch through the preparation of offerings, hearing through sacred chants and the ringing of the ritual bell (*genta*), and inward consciousness through contemplative prayer. Aesthetic experience then becomes a comprehensive form of religious engagement, where materiality and spirituality are inseparably intertwined. Based on these findings, this study proposes a conceptual framework called Balinese Hindu Ritual Aesthetics Model. The model contends that aesthetic experience in ritual is constituted through the integration of four interdependent dimensions: material, ethical, symbolic-

cosmological, and spiritual. The material dimension is manifested in the chosen flowers that are fresh, whole, fragrant and clean. The ethical dimension is about how flowers are obtained and offered, in a respectful and sincere way. The symbolic-cosmological dimension reflects the function of flowers as symbols of cosmic order and human-Divine relations. The spiritual dimension is finally realised through experience of sacredness generated by the embodied participation of worshippers throughout ritual practice. The integration of these four dimensions shows that Balinese Hindu ritual aesthetics is a holistic system of religious experience where beauty serves as a path to spiritual awareness and cultural continuity.

This conceptual model represents the principal theoretical contribution of the present study. Whereas previous scholarship has generally understood flowers either as ritual symbols or as aesthetic components of ceremonial offerings, the present research demonstrates that flowers function as integrative cultural media through which religious norms, embodied aesthetic experience, cosmological symbolism, devotional practice, and cultural reproduction converge within a unified religious experience. Accordingly, Balinese Hindu ritual aesthetics should be understood not merely as an explanation of how beauty is created in ritual, but as a cultural mechanism through which religious values are transmitted, collective identity is sustained, and cultural resilience is strengthened amid the continuing dynamics of contemporary social change.

Symbolic Analysis: Flowers in Aesthetic and Ritual Significance

Analysis of flowers in Balinese Hindu rituals suggests that symbols do not operate as static signs but as aesthetic processes actualised through ritual practice (Morgan, 2010; Triguna, 2025; Turner, 1982). In symbolic anthropology, symbols derive their potency from social practice and sensory encounters. As Victor Turner argues, ritual symbols concentrate multiple layers of meaning—cosmological, affective, and social—within a collectively experienced event (Turner, 1967). In this sense, flowers function as media through which sacred meaning registers in consciousness, both intellectually and viscerally.

This dual mode of symbolic operation is demonstrated through the *tunjung* and white frangipani. The *tunjung* carries elevated cosmological and aesthetic meanings: it evokes centrality, sacredness, and verticality, directing ritual imagination towards cosmic order. In ritual art, the *tunjung* helps orient space physically and symbolically, balancing visual perception and cultivating *taksu*. White frangipani, by contrast, functions primarily through everyday habituation across the *Pañca Yadnya*, embodying a simple and recognisable devotional practice sustained over time. These two modes confirm that symbols communicate not only through spectacle but also through immanent repetition.

From a material religion perspective, religious experience is shaped through the interaction of body, senses, and materiality (Meyer, 2011). Through their colour, scent, freshness, and temporality, flowers activate sensory dimensions that connect the visible with the invisible. The fragrance of white frangipani in everyday ritual conveys an intimate devotional affect, while the image of the lotus in major ritual events and sacred performances evokes a cosmic affect. Symbols therefore operate not only representationally but also through embodied aesthetic and sensory experience.

The local context reinforces this interpretation. Triguna maintains that symbols are living forms of signification that are continuously reinterpreted through practice and that their use sustains cultural continuity (Triguna, 2025). In the Balinese Hindu tradition, the elaborate and repetitive use of flowers in both major and minor ritual acts constitutes an aesthetic and symbolic intervention in social relations. Rituals are therefore not merely enactments of tradition but spaces of creative transformation that enable meanings to evolve while also being preserved.

The criteria for offerings set out in the *Agastya Parwa* also articulate an ethical-aesthetic dimension of symbolism. Freshness, fragrance, integrity, and respect for the source of flowers during gathering demonstrate that symbolic meaning is inseparable from aesthetic quality and ethical behaviour. Read in dialogue with practice, this textual standard shows that symbols derive legitimacy not only from religious teachings but from the alignment of intention, material, and action.

Flowers in Balinese Hindu rituals may therefore be understood as aesthetic-symbolic media that connect cosmology, everyday worship, and cultural continuity. The lotus and *jepun putih* (white frangipani) represent a spectrum of symbolic functions, from the cosmological axis to everyday devotional practice. Together, they constitute a lived artistic and ritual

experience. This synthesis demonstrates that the study of flowers is not peripheral but central to understanding Balinese ritual aesthetics as a system of meaning that is lived, sustained, and transformed over time.

CONCLUSION

This study shows that ritual flowers in Balinese Hinduism are more than ritual ornaments or aesthetic decorations. Instead, they are religious media that integrate sensory perception, ritual practice, cultural symbolism, and spiritual consciousness into a unified religious experience. Ethnographic data show that selecting, collecting, arranging, and offering flowers are embodied cultural practices through which religious values are continually recreated in the everyday lives of Balinese Hindus. The Agastya Parwa provides a normative foundation for these findings by establishing standards of purity, freshness, and ritual appropriateness for flowers used in offerings. The findings are also theoretically grounded in Hindu Aesthetics (Triguna, 2025), which views aesthetic experience as an embodied engagement mediated through perception, symbolism, and religious practice.

The principal contribution of this research is the Balinese Hindu Ritual Aesthetics Model. The model explains that ritual aesthetic experience is generated through the dynamic integration of four interrelated dimensions: material, ethical, symbolic-cosmological, and spiritual. It suggests that the significance of ritual flowers does not rest solely on their visual qualities; rather, they function as transformative media that elevate sensory experience into sacred experience. By integrating materiality, embodiment, symbolism, and devotion within a single analytical framework, the model enables a more holistic interpretation of ritual aesthetics than approaches that regard flowers as either purely decorative objects or disembodied religious symbols. It also contributes to broader theoretical debates in ritual aesthetics, material religion, symbolic anthropology, and embodied religious experience. Beyond the study of Balinese Hinduism, this research contributes to comparative religious studies by presenting flower offerings as integrative cultural media that connect human beings, nature, culture, and the Divine. The findings suggest that ritual aesthetics should be understood not only as the creation of beauty but also as a cultural process that communicates religious values, sustains collective identities, and strengthens cultural resilience amid contemporary social transformation. Further research could develop this conceptual model through comparative studies of ritual aesthetics in other religious traditions in Southeast Asia and elsewhere. Such work would help to foster interdisciplinary dialogue among the anthropology of religion, material religion, ritual studies, and lived religion.

This study demonstrates that flowers in Balinese Hindu ritual are far more than ritual accessories or aesthetic embellishments. Rather, they function as religious media that integrate sensory perception, ritual practice, cultural symbolism, and spiritual consciousness into a unified religious experience.

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Revitalisation of the Symbolism of the Altar (Batu Dolu) in the Socio-Historical Local Wisdom of the Alor Tribal Community

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ABSTRACT

Batu Dolu is a stone altar that historically represented social identity, customary authority, and communal life among the Alor people. This study examines its symbolic significance and the challenges affecting its revitalisation in Alor Regency. Using a qualitative phenomenological approach, data were collected through observation, in-depth interviews, documentation, and thematic analysis. The findings show that Batu Dolu once marked centres of customary governance across Alor's mountainous and coastal kingdoms and continues to appear in the official emblem of the Alor Regency Government. However, its contemporary use is largely ceremonial and administrative, while its historical and cultural meanings are becoming less familiar to younger generations. Revitalisation is constrained by weak intergenerational transmission, limited participation by women and young people, declining customary institutions, and insufficient integration into education, heritage conservation, tourism, and digital media. The study concludes that Batu Dolu should be revitalised as a living cultural symbol rather than preserved merely as an official emblem. This requires community-based initiatives that combine local education, physical conservation, inclusive participation, and creative cultural representation.

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INTRODUCTION

Indonesian society continues to evolve as social change transforms it from a traditional into a modern society (Baharuddin, 2021). The demands of this transformation sometimes lead Indonesians to disregard their own local wisdom, even though such values play a vital role in social progress and in guiding cultural development (Nasiwan, 2012). Some policymakers also underestimate local wisdom, causing its values to become static and less familiar to the public (Nugroho & Dkk, 2018).

Stone artefacts are among the symbols of local wisdom inherited from the ancestors of the Indonesian people and serve as historical witnesses to civilisation and social life (Rahmat, 2017). Their preservation is important because it forms part of a strategic effort to revive Indonesian traditions and cultures that have been overlooked in research amid modern social life. Such efforts can renew public interest in this heritage, particularly among younger Indonesians in the era of globalisation (Suryatman et al., 2020).

In Alor Regency, the Dolu (Altar) artifact is one of the symbols of local wisdom values that are paired as one of the symbols of the Alor Regency regional government, where the symbol depicts the symbols of a traditional house, a banyan tree, a Dolu (altar) and a moko (Alor language), a Mesbah (Hebrew language), a Pulpit (Islam) or an Artifact/Temple (Javanese), which is one of the components that cannot be separated from the local wisdom values of the indigenous people in the Alor or Malua island area (Alor, 2023).

The name change of Dolu (Alor language) Doler (Adang language), Doel (Kabola language) and Masang (Abui language) (Saly, 2024), became Altar by the majority of the Alor community along with the arrival of Portuguese and Dutch missionaries in spreading Christianity on Alor-Pantar Island in 1908 (Badrun, 2008), the taking of the word Dolu to Altar was taken from Hebrew written in the Bible (Widasari, 2023), as a sacred place of worship for the Israelites descendants of Abraham from generation to generation starting from Isaac, Jacob, Joseph, David, Solomon (Salomon) and so on until Maseas which later by Christians this Altar was called the Temple (Udju, 2023), while for the Islamic community the word Dolu was then identified with the stone pulpit where the Head of the Tribe (Abai) and Imam/Khotib delivered messages. social, political and religious to the people or congregation within the scope of the Socio-political area (Nurman Kholis Puslitbang Lektur dan Khazanah Keagamaan Badan Litbang dan Diklat Kementerian Agama RI, 2012). However, for the Alor Doler or Dolu tribe, its existence existed before the arrival of Islamic missionaries from the Ternate Sultanate in the early 15th century, Christian missionaries in the mid-16th century on the island of Alor (Yahya, 2020).

This is because before the arrival of the mubalik and missionaries on the doler or dolu as an important part of the local wisdom values of the local community, it was usually used as a seat for the Chieftain (Abai/Atabeng) in leading meetings, be it Religious meetings (Rituals), Social Meetings, Political Meetings of Traditional Alliances, and a place for the decision of legal cases for the community, as well as being a grave for rebels and perpetrators of crimes within the territory of the traditional Alor government alliance (Darajad & Wula, 2022), therefore the dolu or doler (Altar) is one of the local wisdom values that symbolizes the identity of the existence of tribes that grow and develop in the Alor Island region, especially the tribes in the Northwest Alor District, Alor Regency, including the Alor Tribe, Adang Tribe and Kabola Tribe (Beni, 2024).

The existence of the Dolu stone (Altar) is almost evenly distributed in every large tribal house in the Alor district as the center of the Tribal Government in the traditional alliance of the Alor community, starting from the central area of the Kolana Kingdom, Mataru Kingdom, Pureman Kingdom, Batulolong Kingdom, Kui Kingdom and Alor Kingdom which are geographically located in the Alor island region of Alor Regency, and in the North West Alor District, the dolu is a symbol of the social identity of the Alor tribe, where the existence of the dolu is usually placed in front of the main house which in the traditional language is called rambi uma or main house, which is in the social identity of the Alor tribe.

In the North West Alor District, there are several tribes in the North West Alor District that have Dolu Stone as an Artifact placed in front of the Tribe's house, including: Dolu Stone (Altar) of the Adang Tribe which is placed in front of the Lakatuil Traditional House in the Adang-Bampalola Tribe, and in the house of the Adang Oa-Aimoli Tribe, while in the Alor Tribe community, Dolu Stone (Altar) is placed in the Pelang Seran-Pusu-Rebong House of Alor Besar, Pelang Serang House of Alor Kecil, Ruma manglolong Alor Kecil and the House of Uma Tukang, Uma Kapitan and Uma Dopu in Dulolong Village.

The Dolu (Altar) symbol is traditionally believed by the Alor people to be a historical reality that in that region there was a center of traditional government power in the traditional alliance of the Alor Regency regional government. However, on the other hand, the existence of Dolu (Altar) as a symbol of local wisdom in the life of the Alor tribe, is increasingly eroded by the current of social change in the social life of the Alor tribe. Dolu has become a meaningless stone that seems to be a silent witness to the civilization of the Alor tribe with tribal kingdoms that once grew and developed in the social life of the Alor tribe in the 13th century - 19th century in Alor Regency. Therefore, this phenomenon is interesting to be studied scientifically to see how the dolu symbol in the local wisdom values of the Alor tribe, with the title: Revitalization of the Symbolization of the Dolu Stone (Altar) in the Social History of Local Wisdom of the Alor Tribe in Alor Regency (Phenomenological Study of the Alor Tribe in the North West Alor District, Alor Regency).

This scientific study is directed to see how the Altar Stone Symbol (Fato Dolu) in the Local Wisdom of the Social Life of the Alor Tribe in Alor Regency and the revitalization of dolu as a value of wisdom in the social life of the Alor Tribe in Alor Regency. The purpose of this study is to understand and describe the Altar Stone Symbol (Fato Dolu) in the

Local Wisdom of the Social Life of the Alor Tribe in Alor Regency and describe the revitalization of the Dolu stone symbol (Altar) in the local wisdom of the Alor Tribe in Alor Regency. The theories applied in this study include the theory of symbolic interaction and phenomenology, both of which focus on understanding the meaning that emerges in social life through subjective actions created by the Alor Tribe.

In addition, Antonio Gramsci's (1971) theory of cultural hegemony is important for exploring how traditional values such as Batu Dolu can be suppressed by modern values regarded as more 'civilised' or 'advanced'. This hegemonic process operates not only through coercion but also through passive social consent, as society begins to view cultural heritage as obsolete. This study adopts a qualitative phenomenological approach (Creswell & Creswell, 2018). It examines a phenomenon evident in community life through the subjective experiences of informants who possess knowledge of the socio-historical revitalisation of the Altar Stone symbol (Fato Dolu) within the local wisdom and sociocultural order of the Alor tribal community. Data were collected through triangulation, including observation, interviews, and documentation, and were analysed qualitatively to support the study's conclusions.

METHODS

This research employed a qualitative method with a phenomenological approach. This approach was chosen to analyse the subjective meanings attached to the Altar Stone (Batu Dolu) and the ways in which informants interpreted it as a reflection of the local wisdom of the Alor people. The research focused on analysing the experiences, social values, and historical context associated with this symbol within the traditions of the Indigenous people of Alor Regency.

Phenomenological research is a form of scientific inquiry that seeks to understand events or phenomena from the perspectives of the individuals or groups who experience them. According to Moleong (2019) and Abdul Nasi et al. (2023), this approach allows researchers to explore the deeper meanings of participants' lived experiences. Similarly, Creswell (2018) emphasises that qualitative research focuses on direct interactions with participants in natural settings, thus requiring adaptive and context-sensitive data-collection methods.

In this qualitative phenomenological study, data were collected through triangulation, including field observations, in-depth interviews with informants, and a review of supporting documents. These techniques enabled a comprehensive and systematic understanding of the role of Batu Dolu in the sociocultural structure of the Alor community. The data were analysed thematically (Braun & Clarke, 2006) through transcription, initial coding, theme development, and validation in discussions with key informants. The coded data were then verified through source triangulation to strengthen the reliability of the findings and analysed qualitatively to identify patterns of meaning and the dynamics of revitalisation (Zahroh et al., 2025).

This research highlights the importance of preserving local wisdom amid the pressures of modernisation. Batu Dolu, as a historical artefact, serves as a symbol of social identity and customary authority in various kingdoms on Alor Island, yet its revitalisation remains suboptimal. The findings indicate that, although Batu Dolu is still recognised as a symbol of social status under customary law, revitalisation efforts remain limited to the symbolic sphere of governance and have not been fully integrated into education, physical conservation, or tourism representation. A stronger strategy is therefore needed to ensure that the values embodied in Batu Dolu are understood and passed on to younger generations.

RESULTS AND DISCUSSION

The symbol of the altar stone (fato dolu) in the local wisdom of the social life of the Alor tribe in Alor Regency

Research studies show that the Nezbah Stone (Fato Dolu) is a type of stone artifact arranged in a circle with a height of approximately 2-3 meters in front of the courtyard of a tribal house or traditional government house in the Alor Regency area. Generally, this artifact is referred to by most Alor people as an altar. However, traditionally, the community knows it as Masang in the Abui language, while in the Alor tribe it is called Dolu in the Alor language, Doler in the Adang language, and Doel in the Kabola language, all of which refer to a collection of circular stones arranged around a banyan tree in the courtyard of the traditional government house with a height and width of 2-3 meters each, as a symbol of social identity for the position of the traditional government in the social life of the traditional community in Alor Regency.



Picture 1: Photo of the researcher in front of the Dolu stone.

Socio-historically, in the Alor Island and Pantar Island regions of Alor Regency, there were two traditional governments that grew and developed before the era of western colonialism (Spanish, Portuguese, and Dutch). These two traditional governments were the Abui Kingdom in the mountainous region of Alor Island (Malua) and the Munaseli Kingdom in the coastal area of Alor-Pantar Island. However, due to conflicts and wars between the Abui and Munaseli Kingdoms, and the growing power of the descendants of these two kingdoms, the descendants of the Abui Kingdom established a social solidarity of five alliances: the alliance in the mountainous region, encompassing Kolana, the Mataru Batu Lolong, and Kabola. Meanwhile, the descendants of the Munaseli Kingdom also established a solidarity of five alliances, consisting of the kingdoms of Pandai, Baranusa, Balagar, Alor-Bunga Bali, and Malua-Kui. These solidarity values persist to this day.

Further research reveals that the symbols of the Altar Stone (Fato Dolu) and the banyan tree within this traditional government system were later established as the Regional Command Symbol of Alor Regency. These symbols include the tribal house, the Altar Stone (Fato Dolu), the banyan tree, and the moko, combined with the star symbol and the rice and cotton symbols. However, traditionally, the symbol of the Alor Regency regional government emerged from the values of local wisdom within the customary governments of the Alor Island region, namely the Kolana Customary Government, the Matataru Customary Government, the Pureman Customary Government, the Batulolong Customary Government, the Malua-Kui Customary Government, and the Alor-Bunga Bali Customary Government.

Further research has shown that within the Alor-Bunga Bali customary government, the Altar Stone (Fato Dolu) traditionally symbolizes the socio-religious standing of the traditional alliance of the Alor-Bunga Balinese people, consisting of the Alor 3 Village Community (Alurung Lafo Talo), the 7 Village Temple Community (Pura Lafo Pito), and the 10 Village Adang Community (Adang Lafo Karto). These communities are located in the Northwest Alor sub-district of Alor Regency. The villages within the Alor-Bunga customary government circle all have altars (Fato Dolu) located in front of the tribal or customary government houses, symbolizing the social standing of their respective customary government leaders. The altar stone (Fato Dolu) symbolizes the authority of the customary government, from the Kingdom, to the Captaincy, to the Chieftaincy, and finally to the Temukungan. Alor 3 villages (Alurung Lafo Tallo), in historical studies have three tribal houses, namely the Pelang Serang-Puse Rebong Bunga Bali House located in Alor Besar Village (Loffo Beng/Bang Mate), the Pelang Serang Baorae House in Alor Kecil Village (Loffo Kisu/Bang Tina), and the Pelang Serang Baorae Dulionong House in Dulolong Village (Dulionong/Anabang) whose descendants are thought to come from the same genetic lineage, namely the descendants of the marriage of Mau Pelang and Muriang Bali in Bunga Bali, resulting in three Dynasties, Maupelang-Baololong, Baololong-Tulimau (Tulimau Dynasty) in Alor Besar. The Saku Bala Duli Duli Dynasty- Kaing Saku, Kaing Saku-Naesaku, Naesaku-Dopunae, Dopu Nae- Nampira Bukang (Nampira Dynasty) in Dulolong. Because their descendants once became kings of the Alor Kingdom, members of the Regional Council, and leaders of the Alor Regency government during the Old Order, New Order, and Reform eras.

Further research also shows that, from the perspective of local wisdom, the three villages of the Alor people were the center of the Alor Bunga Bali kingdom, ruled by three dynasties: the Bunga Bara, Maupelang (1500-1600), the Baololong Dynasty (1600-1800), the Kawiha-Tulimau Dynasty (1800-1900), and the Nampira Dynasty (1900- until the emergence of the Swatantra government system in 1964). The customary government's territory encompassed three villages, seven temples, and ten villages during the Bololong and Tulimau dynasties. During the Nampira Dynasty, the territory expanded into the Alor-Pantar Kingdom, encompassing the Northwest Alor region and Kalabahi City.

Revitalization of Batu Dolu Symbol in Local Wisdom of Alor Tribal Community in Alor Regency

Beyond the lack of integration into the local curriculum, the revitalisation of Batu Dolu faces a broader structural obstacle: the effects of modernisation and globalisation. Shifts in social values, particularly among younger people, towards the modern economy and contemporary lifestyles often diminish appreciation of traditional cultural heritage (Baharuddin, 2021). In this context, Batu Dolu, which is rich in traditional socio-religious values, risks being deemed irrelevant to the practical needs of modern life. In their study of the Osing Indigenous community, Arifah and Saputra (2023) found that, without effective adaptation strategies, local wisdom is increasingly marginalised by more powerful and visually appealing global cultural narratives. This is evident in Alor, where the city park in Kalabahi adopts Javanese-Balinese architectural designs, thereby indirectly overlooking local symbols such as Batu Dolu and accelerating the erosion of Indigenous cultural identity.

A further problem arises from changing values within Alor society. Modernisation brings individualistic and materialistic values that often conflict with the communal and spiritual values embodied in Batu Dolu. Nasiwan (2012) shows that the transition from traditional to modern society often erodes cultural practices considered incompatible with the demands of a market economy. Younger people in Alor are more interested in employment opportunities in formal and modern sectors than in preserving cultural artefacts, creating a knowledge gap between older generations who understand the meaning of Batu Dolu and younger generations who are increasingly detached from their ancestral heritage.

At the institutional level, customary institutions have experienced a decline in their role under globalisation. Institutions that should safeguard local wisdom have instead lost influence to modern bodies such as local governments and markets. Beni (2024) shows that, in Alor society, the positions of tribal chiefs (Abai/Atabeng) and customary councils are increasingly constrained by a more bureaucratic village-government system. This decline has weakened the coordination of Batu Dolu revitalisation efforts, both in terms of physical maintenance and the transmission of its values to future generations.

Despite the revitalization narrative often dominated by male figures and the government, women in Alor society are the indirect backbone of preserving the collective memory of Batu Dolu. Women, through their daily activities and participation in traditional rituals, often serve as guardians of small narratives, family stories, and symbolic meanings not recorded in official documents. However, their voices and contributions to decision-making processes regarding revitalization are often marginalized. This neglect of women's roles has the potential to disrupt the chain of transmission of Dolu values, which live on in domestic and community spaces managed by women.

In terms of communication and media, globalisation has created an information environment saturated with homogeneous popular culture. The limited representation of Batu Dolu in mainstream media and on digital platforms further complicates efforts to introduce this symbol to a wider audience, particularly younger people. As Suryatman et al. (2020) state, cultural artefacts need to be presented through engaging and accessible narratives to prevent them from being lost within global culture. The lack of creative content highlighting Batu Dolu through films, documentaries, or social media has further distanced this symbol from the everyday lives of contemporary society.

Development policies that focus primarily on economic growth often neglect cultural preservation. Local governments prioritise physical infrastructure and mass tourism, which are considered to provide immediate economic benefits. For example, the development of a park with an external architectural style in the Kalabahi coastal reclamation area overlooks the potential to strengthen local identity through the Batu Dolu symbol. Nugroho and Dkk (2018) emphasise that, without strong political commitment from stakeholders, efforts to revitalise local wisdom will continue to be

subordinated to short-term economic interests. Comprehensive integration of development planning and cultural preservation is therefore needed so that Batu Dolu does not become merely a marginalised symbol amid modernisation.

The challenge of revitalisation is evident in the gap between older and younger generations. While older generations possess deep knowledge of the sacred meaning and history of Batu Dolu, younger generations often remain passive spectators rather than creative participants. Top-down, ceremonial revitalisation efforts, such as the use of Batu Dolu in regional symbols, fail to create opportunities for young people to interpret its values and connect them to their identities in the digital age. As a result, young people, who should be key actors in cultural preservation, may feel alienated and regard Batu Dolu as static and irrelevant to their lives.

Revitalisation approaches centred on traditional elites and government often overlook the contributions of marginalised groups, particularly women and younger people. Women, as custodians of traditions and family narratives, play a crucial role in transmitting Batu Dolu values. Younger people, meanwhile, can reinterpret and communicate these cultural narratives through diverse forms of creative media. Excluding these groups from the planning and implementation of revitalisation programmes makes preservation efforts superficial and unsustainable because such initiatives address symbolic aspects without involving those most closely connected to everyday cultural life.

The Gap Between Historical Values and Contemporary Practices

The phenomenon of cultural lag is clearly evident in how the Alor people transmit the values associated with Batu Dolu. An artefact that once stood at the centre of social, political, and spiritual activity and symbolised customary governmental authority is now more often viewed as an administrative element within an official regional emblem. Stuart Hall's theory of cultural representation (1997) is highly relevant to understanding this shift in meaning. According to Hall, the meaning of a symbol is not fixed but is shaped through dominant cultural practices and discourses.

In the context of Batu Dolu, the transition from a living symbol of customary power to merely a symbol of local government reflects a shift from traditional values to modern bureaucratic logic. Effective revitalization requires considering how the representation of Batu Dolu can be restored to its original meaning through media, education, and everyday cultural practices. This shift in function demonstrates a significant difference in understanding between the older generation, who interacted directly with the symbol, and the current generation, who only know Dolu as an official and ceremonial representation. This separation of meaning is further exacerbated by the lack of efforts to internalize Dolu values through education or traditional traditions.

This separation of meanings is further exacerbated by the weak internalization of Dolu values through education or traditional traditions. This suggests that Dolu revitalization remains limited to symbolic aspects, such as recognizing Dolu in the regional government emblem, but has not been accompanied by concrete efforts such as integration into the local curriculum, maintaining historical sites, or developing cultural tourism destinations focused on Dolu. Consequently, the noble values that should be passed on are diminished, making it difficult for the younger generation to understand their philosophical and historical meaning. This situation aligns with Baharuddin's (2021) statement, which emphasizes that modernization often causes communities to set aside local wisdom amidst social change. This is evident in the case of Batu Dolu, where modern lifestyles, economic pressures, and the hegemony of global values have displaced traditional practices that were once the foundation of social life. Thus, there is a significant gap between Dolu's historical significance as a symbol of traditional civilization and its role in the social life of the Alor people today.

The impact of this phenomenon is contradictory. On the one hand, Dolu remains valued as an important artifact and is preserved in the official emblem of the regional government. However, on the other hand, its essence is fading, leaving the younger generation only familiar with Dolu as a physical object without a deep understanding of its philosophy and historical value. If left unchecked, Dolu risks becoming merely a "silent symbol" and losing its social and historical significance. Therefore, it is crucial to bridge the gap between historical values and modern practices through a holistic revitalization strategy (Darajad & Wula, 2022).

Revitalization should not be limited to administrative aspects, but also encompass educational dimensions, the preservation of physical artifacts, and the application of Dolu values in contemporary socio-cultural life. These efforts can be realized through a curriculum that incorporates local wisdom, the preservation of historical sites, the involvement

of the younger generation in traditional traditions, and the development of cultural tourism that promotes the Dolu narrative as part of the heritage of civilization. With these steps, Batu Dolu has the potential to once again serve as a link between ancestral heritage and the dynamics of modern society in the age of globalization.

CONCLUSION

The study concludes that: 1) Batu Dolu (the Altar) symbolises the social identity and customary government of the major tribes and kingdoms that developed on Alor Island, from the mountainous kingdoms of Kolana, Mataru, Pureman, and Batu Lolong to the coastal kingdoms of Kui-Malua and Alor in Alor Besar, Alor Kecil, Dulolong, and Kalabahi City. The Alor Regency Government has adopted Batu Dolu as a principal regional symbol displayed on the uniforms of its employees. 2) The revitalisation of Batu Dolu remains largely confined to its official symbolic role. It has not yet been fully incorporated into the local curriculum, the restoration and maintenance of Batu Dolu at tribal houses, or the creation of miniature Batu Dolu monuments representing civilisation in cultural parks and coastal areas of Kalabahi City, Alor Regency.

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Forests, Lived Relations, and Dance Creation in Papua

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ABSTRACT

This study examines how forests are understood as living spaces within Papuan worldviews and how disruptions to human–forest relations affect sources of artistic creation, particularly dance. The study employs a conceptual qualitative design based on literature concerning Indigenous human–nature relations, cultural ecology, environmental change, performing arts, and dance creation, complemented by contextual reflection on selected cultural and artistic practices in Papua. Relevant sources were identified, grouped according to recurring themes, and interpreted through conceptual synthesis focusing on forest relations, sociocultural continuity, embodied experience, and artistic creation. The analysis shows that forests shape sociocultural relations, cosmological orientations, and embodied knowledge among Papuan communities while sustaining cultural practices that inform dance creation. Pollution, deforestation, and forest conversion disrupt these relations by fragmenting everyday practices, bodily experience, and cultural meanings that support creative processes. The forest is therefore not presented as the sole origin of Papuan dance, but as a significant relational space within the wider network of lived experience from which artistic creation emerges. The study contributes to performing arts scholarship by conceptualizing the forest as a relational and epistemic foundation of dance creation. It also provides a reflective basis for culturally grounded artistic practice, cultural policy, and contextual choreographic education.

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INTRODUCTION

For Papuan communities, the forest is understood as a living space. It sustains social, cultural, and spiritual relations, not merely as an ecological space. In many local cosmologies, the forest is conceptualised as *mama*, a life-giving presence that nurtures and sustains human existence (Candraningrum & Janice, 2025; Wambrau et al., 2022). This relational understanding is embodied in everyday practices such as sago processing, which has been practised since prehistoric times (Putri & Suroto, 2023; Suroto et al., 2023), social rituals (Sarang & Jiaripits, 2025; Zesa Azis & Ali Muddin, 2025), and diverse cultural expressions grounded in lived engagement with nature (Kayame, 2023; Marwati & Wijaya, 2023). Within this context, the forest does not function as a cultural backdrop but actively shapes how the body, space, and movement are understood as part of collective life.

Anthropological and cultural ecology studies consistently show that Indigenous cultural practices depend on the continuity of human–environment relations (Bleskadit et al., 2026; Hutabarat, 2022; Lubis, 2022; Manoby et al., 2023; Pekey, 2025; Rahmawati A. Damiti et al., 2025; Warwer et al., 2024; Wicaksana, 2024; Zahra et al., 2025). These relations operate as reciprocal systems that generate meaning, identity, and social practice. When such relations are sustained, cultural practices remain continuous; when disrupted, they tend to weaken or fragment. This perspective underscores that environmental continuity is inseparable from cultural sustainability and symbolic expression.

Over recent decades, increasing pressures on Papuan forests, commonly framed within the discourse of deforestation, have significantly altered forest conditions and functions (Irmayani et al., 2025; Kesaulija et al., 2020; Nahriyah, 2024; Pramudya et al., 2023). These shifts change the physical landscape while simultaneously altering how people live and interact within the forest (Jasmine et al., 2025; Kadir et al., 2022). As the forest as *mama* loses its life-sustaining role, sociocultural practices rooted in this relationship begin to erode. Sago processing exemplifies this relational logic, extending far beyond simple food production to serve as a social and symbolic practice that breathes life into performing arts like *Tari Pangkur Sagu* (Butarbutar et al., 2025; Yono et al., 2025). When such practices weaken, cultural messages that once circulated through daily life become fragmented, reducing embodied experiences that serve as key sources of dance creation.

Within performing arts studies, dance is widely understood as an embodied practice shaped by specific social, cultural, and spatial relations (Borowski, 2023; Zhou et al., 2023). Research on art and environment has also shown that changes in lived landscapes influence how artists imagine the body, movement, and space (Bentz et al., 2022; Bojner Horwitz et al., 2022; Foster & Turkki, 2023; Kaufman, 2025; Sovia & Indrayuda, 2024; Tian & Wise, 2025). Existing studies, however, tend to develop along separate lines. Research on Indigenous communities and forests focuses mainly on ecological knowledge, livelihoods, identity, and cultural continuity, while arts scholarship commonly approaches deforestation as a theme, visual subject, or environmental message represented in artistic works (Nataprawira et al., 2024; Rahayaan, 2025). These studies have not sufficiently explained how the disruption of human–forest relations alters the embodied experiences, sociocultural practices, and systems of meaning from which dance creation itself emerges.

This gap is particularly significant in the Papuan context, where forests are embedded in everyday practice, cosmological understanding, and embodied cultural knowledge. Previous studies have documented forest loss, cultural change, and environmentally themed artistic production, but the forest has rarely been conceptualised as an epistemic foundation of dance creation. Consequently, limited attention has been given to how pollution, deforestation, and forest conversion may weaken the experiential and relational sources that sustain artistic imagination. Addressing this gap is also important for higher arts education, where choreographic practice depends on more than technical competence and aesthetic form; it requires sustained engagement with the cultural experiences and lived relations that shape artistic identity (Dozan & Cholis, 2020; Saputra et al., 2024; Suartini & Supir, 2024; Tandapai & Mappiasse, 2025). When sociocultural practices erode, artistic production risks losing relational depth and becoming confined to surface-level symbolism (Direktori Keberlanjutan, 2025; Wiratno & Sudibyo, 2025; Yuli Anggraini et al., 2025). Understanding deforestation as a crisis of relational meaning, rather than solely an environmental issue, is therefore essential for sustaining dance creation in Papua.

Based on this context, the article addresses how deforestation, as a weakening of human–forest relations conceptualised through the notion of *mama*, affects the continuity of sociocultural practices and sources of dance creation in Papua. It poses two research questions: (1) how pressures framed as deforestation weaken human relationships with the forest as a living space; and (2) how a conceptual understanding of these relations can inform reflective approaches to dance creation and pedagogy in higher arts education.

Through a conceptual approach grounded in literature review and theoretical reflection, this article addresses this gap by examining deforestation as a crisis of relational meaning with direct consequences for dance creation. It advances the argument that the forest should be understood not only as an ecological setting or thematic source but also as an epistemic and relational foundation that shapes embodied experience, sociocultural continuity, and artistic imagination. The article therefore contributes to performing arts scholarship by connecting ecological disruption with the sustainability of creative sources and by providing a conceptual basis for context-based choreographic education in Papua.

METHODS

The study employs a literature review and theoretical reflection as its primary methodological approach. This research design was chosen because the study does not aim to collect empirical field data but to develop a conceptual understanding of the relationship between deforestation, sociocultural practices, and sources of dance creation in the Papuan context (Kozlenkova et al., 2025; Naeem et al., 2023). In this article, the term Papua refers to Papua as a cultural region inhabited by diverse Indigenous communities whose lived relations, cosmological views, and sociocultural practices are deeply rooted in the forest as a living space. The literature review draws primarily on peer-reviewed journal articles and scholarly publications addressing Indigenous human–nature relations, cultural ecology, environmental disruption, performing arts, and dance creation. Sources were selected according to their conceptual relevance to human–forest relations, Papuan sociocultural contexts, embodied experience, and artistic practice. Non-academic materials and visual documentation were included selectively to provide contextual illustrations, but they were not used as the primary basis for conceptual claims.

In addition to the literature review, the study incorporates conceptual reflection on artistic practice as part of the analytical process. This reflection is not intended as documentation of artistic practice or as an empirical case study, but as a way of reading cultural and artistic practices, such as sago processing and related performance expressions, as illustrations of lived relations between humans and the forest. Such reflection helps clarify how the weakening of ecological relations due to deforestation leads to fragmentation of cultural messages and a reduction in sources of inspiration for dance creation.

The analysis is conducted qualitatively by interpreting key concepts that emerge from the literature and theoretical reflection, and by relating them to the contexts of dance creation and choreographic education. The analytical stages include: (1) mapping concepts of human–forest relations within Papuan cultural contexts; (2) interpreting the impacts of deforestation on sociocultural practices and cultural meaning; and (3) formulating conceptual implications for sources of dance creation and choreographic learning in higher arts education.

To strengthen the validity and trustworthiness of the conceptual analysis, the study applied source triangulation, thematic consistency, and contextual verification. Interpretations were compared across peer-reviewed studies from cultural ecology, Indigenous studies, environmental scholarship, and performing arts research rather than being derived from a single disciplinary perspective. Recurring concepts and relational patterns were retained only when they were supported by multiple sources or were consistent with documented Papuan cultural and artistic contexts. Contextual and visual materials were used as supporting illustrations and were not treated as substitutes for scholarly evidence. The analytical interpretations were also reviewed for coherence across the research questions, conceptual categories, and conclusions to reduce selective reading and unsupported generalisation.

Through this approach, the study seeks to produce a coherent conceptual understanding of deforestation as a crisis of relational meaning and to explain how this crisis affects the sustainability of sources of dance creation. The methodology therefore aligns with the article’s objective of contributing conceptually to performing arts scholarship and providing a reflective foundation for dance creation and education.

RESULTS AND DISCUSSION

Forests as Living Spaces and Sources of Dance Creation in Papua

The synthesis of literature indicates that, within Indigenous societies including those in Papua, forests cannot be understood solely as ecological spaces or natural resources. They function as living spaces that shape comprehensive human–environment relations. Studies on Indigenous knowledge and cultural ecology emphasise that these relations are reciprocal, developed through intergenerational experience, and embedded in value systems, social practices, and worldviews. Within this framework, the forest is positioned as a relational entity that sustains life, meaning, and cultural continuity rather than as a passive object separated from human existence.

Scholarship on Indigenous Knowledge Systems and Practices shows that Indigenous knowledge emerges from long-term interaction with specific ecosystems (Daniel et al., 2022; Hastuti et al., 2022; Nagal, 2025; Suwarno et al., 2022). This knowledge extends beyond environmental management to shape relational ethics between humans and nature, where the natural world is recognised as a living partner with moral and symbolic standing rather than as an object of exploitation. Relational value perspectives and human–nature ontologies in contemporary sustainability studies further affirm that human–environment relations involve moral, affective, and symbolic dimensions that cannot be reduced to instrumental value alone. In this sense, the forest as a living space is not always represented through the visible presence of human bodies, but through relational meanings attached to it as a source of life, food, and healing (Arinta, 2022). Consequently, representations of forests without human figures continue to reflect the lived relations that underpin everyday practices in Papuan communities (Figure 1).



Picture 1: Forest landscape in the Baliem Valley, Papua, understood by local communities as a living space that functions as a source of food and traditional medicine in everyday practice.
(Priyadi, 2025) [source]

Several studies focusing specifically on Papua explicitly note that forests and land are understood as *mama* or mother. Within Indigenous Papuan worldviews, the forest is treated as a life-giving presence that provides, nurtures, and sustains existence without demanding return, mirroring the relationship between a mother and her child (Laike, 2025; Naru, 2024; Pamungkas et al., 2022; Wahid, 2023). This understanding extends beyond symbolic interpretation and is enacted in everyday practices, value systems, and cosmological orientations. The concept of the forest as *mama* thus represents a living cultural construct articulated clearly in academic scholarship and affirms the forest's role as a relational foundation for cultural continuity in Papua.

In the Papuan context, this human–forest relationship is reflected in a range of sociocultural practices grounded in forest ecosystem continuity. Practices such as sago processing, collective labour, customary rituals, and resource management based on local knowledge function as mechanisms for transmitting values, knowledge, and cultural identity. Research in cultural ecology highlights how these practices sustain everyday survival while keeping the community's core cultural meanings and messages alive (Fiharsono et al., 2024; Kambu et al., 2022; Mollet & Silo, 2024; Warami & Mofu, 2024; Yanto Wenda et al., 2025). Within this framework, sociocultural practices can be understood as living archives that preserve relational knowledge between humans and forests.

This relationship is also evident in the traditional boat-building practices of the Sentani community, where timber sourced from forest areas supports life within the lake environment (Figure 2). More than a means of mobility, boats also hold social and cultural significance, including within Isolo cultural practices. This illustrates that forests provide more than food resources; they sustain systems of mobility, social relations, and cultural expression. Contemporary shifts from wooden boats to fibreglass vessels may be read as changes in material and cultural relations, which in turn influence how cultural practices and artistic expressions are carried out.



Picture 2: The process of making *khayi* (traditional boats) by the Sentani community in Yoka Village, East Sentani, using forest timber as part of everyday life and cultural practice.

Author's documentation (2023) [source]

Human-forest relations as living space are also reflected in hunting practices and wildlife conservation among Papuan communities. In forest areas around Sentani, the forest continues to be understood as a space for wild boar hunting governed by an ethic of balance rather than unrestricted exploitation. In other regions, forests function as spaces for protecting life, as seen in practices aimed at conserving birds of paradise. Within this framework, the forest is understood as a nurturing space that safeguards the continuity of other living beings rather than serving solely human use. Such conservation practices reaffirm the forest's position as *mama* that gives birth to, nurtures, and protects life, while also serving as an important aesthetic source for artistic creation.

The forest as a living space is further evident in the use of mangrove forests by coastal Papuan communities. In Enggros Village, ethnographic studies of women's knowledge systems (Figure 3) show that the mangrove forest is much more than a kitchen or a grocery store; it is a sacred space woven with customary values, ancestral knowledge, and daily practices full of meaning. Knowledge concerning timing, methods, and rules for entering mangrove areas establishes ethical relations between humans and nature and positions the forest as a space of learning and narration. In this context, mangrove forests function as living spaces that give life, nurture, and educate, reinforcing the understanding of the forest as *mama* that sustains the continuity of social and cultural practices.



Picture 3: Women's Forest (*Tonotwiyat*) in Enggros Village, Jayapura, a sacred space reserved for women within everyday sociocultural activities.

(Tarigan & Lisnawati, 2024) [source]

These living-space relations have direct implications for artistic creation, particularly dance. Scholarship in performing arts and environmental art shows that artistic practice emerges from embodied experience shaped by specific spaces, practices, and social relations. In dance, the body does not operate as a neutral medium but as one formed through everyday engagement with nature and community. Movement, rhythm, and choreographic structure reflect ways of

living, value systems, and human relationships with the environments in which they are situated. Dance can therefore be understood as a sociocultural expression grounded in the continuity of human relations with lived space.

Beyond academic literature, the understanding of the forest as *mama* is consistently reflected in visual documentation of everyday life among Indigenous communities in the Papuan interior (Figure 4). These visual records show how forests are explicitly recognised as life-giving spaces that give birth to, nurture, and protect communities. Although such documentation is not produced as academic research, it functions as contextual illustration that reinforces scholarly findings on the forest as a living space and as a source of sociocultural relations.



Picture 4: The geographical relationship between swamp forests and cultural practices shaping the sociocultural life of customary Asmat communities in South Papua.
(Yuliani, 2020) [source]

Cosmological understandings of the forest as *mama* have long served as sources of reflection in artistic practice. In one dance-drama work created by the author, narratives of hunting in the Cycloop Mountain forest are articulated through the Sentani worldview (Peradantha, 2020). The work presents Robongholo, a *mama* figure or guardian deity of Mount Cycloop, not as a destructive force but as a maternal presence who offers guidance through song and movement (Figure 5). This artistic practice does not aim to function as ethnographic representation, but as an artistic reflection on local cosmology that understands the forest as a living and relational entity, translated into a cross-cultural hybrid form of performance. In this context, the artwork operates as a space for articulating socio-religious values embedded in human–forest relations in Papua.



Picture 5: Representation of Robongholo as *mama* (the carried dancer) in a collaborative performance reflecting forest cosmology as a living space and a source of inspiration for hybrid performing arts creation.

(Newsportal, 2023) [source]

These conceptual findings indicate that, in the Papuan context, the forest constitutes a relational foundation for the continuity of cultural practice and dance creation. Artistic practice does not emerge from an abstract void, but from networks of lived relations that shape imagination, embodiment, and meaning. When human–forest relations as living space are sustained, cultural messages remain intact within artistic practice, allowing artistic identity to develop in a strong and contextual manner. Understanding the forest as a living space and as a source of sociocultural practice is therefore central to reading dance as a sociocultural reflection of Papuan communities, and to assessing how shifts in these relations affect the sustainability of artistic creation.

Disruptions to Forest Relations and Their Impact on Dance Creation

While the previous section conceptualised the forest as a living space that sustains sociocultural practice and artistic creation, the findings in this section demonstrate that such relations are not static. Human–forest relations in Papua are increasingly disrupted in ways that gradually alter forest functions, meanings, and embodied experience within lived space. Beyond altering the physical ecology, these disruptions compromise cultural continuity and the foundations of artistic creation, particularly dance, which relies entirely on embodied experience, spatial engagement, and lived relations.

Waste and the Erosion of Relational Ethics in the Forest as Living Space

One visible form of disruption in human–forest relations is the presence of waste in forest areas that were previously understood as living and customary spaces (Figure 6). The impact of waste extends beyond physical damage to the forest, marking a fundamental change in the ethical values that shape human relationships with the natural world. Forests once understood as nurturing spaces, sites of learning, and ritual environments gradually lose their symbolic force when treated as dumping grounds. This transformation affects how bodies inhabit and relate to forest space, as polluted environments no longer support the full enactment of everyday and cultural practices.



Picture 6: Waste intrusion that damages mangrove forest ecosystems relied upon by coastal Papuan communities.
(Naser, 2021) [source]

This erosion of relational ethics is also reflected in the everyday experiences of coastal communities, where marine and mangrove spaces once integral to domestic and ritual practices can no longer be used safely. Seawater that was previously used for seasoning and washing food materials has, under certain conditions, begun to cause skin irritation and disrupt everyday practices (Naser, 2021). Such embodied experiences indicate that pollution degrades environmental quality while simultaneously disrupting the affective and sensory bonds between humans and their lived environments. When bodies can no longer engage safely and meaningfully with their surroundings, forests and seas gradually lose their roles as nurturing and learning spaces.

In the context of dance creation, this erosion of relational ethics leads to a weakening of embodied experience within lived space. When forests are no longer treated as respected environments, affective bonds between humans and nature diminish. As a result, the sensory, kinaesthetic, and emotional experiences that have long served as sources of artistic imagination become increasingly constrained. Dance practices rooted in embodied relations with nature thus lose a significant part of their relational foundation.

Deforestation and the Disruption of Lived Practice Continuity

A more structural form of disruption is deforestation, which directly severs the continuity of human relations with the forest as a living space. Deforestation not only removes forest cover in physical terms but also interrupts life practices that depend on the forest's existence, including hunting, gathering food and medicinal materials, and a range of sociocultural practices transmitted across generations. In Sentani, deforestation in the Cycloop mountain forest threatens the survival of flora and fauna traditionally used by local communities. Consequently, sociocultural practices such as Isolo performance, which continue to reference hunting practices in the Cycloop forest, are also placed at risk. Cultural values passed down through generations weaken when human–forest relations within lived spaces are no longer sustained. In this sense, deforestation should be understood as a rupture of relational continuity rather than simply a transformation of the landscape. This rupture has direct consequences for artistic creation. Dance practices that emerge from embodied everyday experience in relation to the forest lose their experiential sources when lived space disappears or becomes fragmented. When hunting, food processing, or traditional healing practices can no longer be carried out, embodied experiences once rich in rhythm, gesture, and meaning begin to fade. As a result, the imaginative and narrative sources that support dance creation are significantly diminished.



Picture 7: Left: Deforestation of the Cycloop mountain forest threatening local flora and fauna. Right: Isolo performance representing the hunting culture of the Sentani community in the Cycloop mountain forest. Left, (Wenda, 2021). Right, author's documentation (2023) [source]

Forest Conversion and the Transformation of Lived Space Meaning

Beyond deforestation, disruption of forest relations also occurs through land conversion, particularly the transformation of forests into single-purpose production spaces such as oil palm plantations and other extractive zones (Mahmud, 2022; Rahman et al., 2023). Beyond changing the ecological function of the forest, such conversion completely transforms the essence of lived space. The forest, traditionally honoured as *mama* because it gives birth to, nurtures, and protects life, is transformed into a cold economic commodity driven by productivity and profit. This shift in meaning affects cultural identity and the cultural messages embedded in artistic practice. When forests are reframed as production spaces, the symbolic and cosmological relations that once formed the foundation of cultural practice are weakened. Dance creation grounded in the understanding of forests as relational living spaces loses its conceptual grounding, resulting in increasingly fragmented cultural expression. In this context, forest conversion constitutes an ontological disruption that reshapes how communities understand lived space while simultaneously redirecting artistic identity and creative orientation.

Implications of Relational Disruption for Sources of Dance Creation

These three forms of disruption, waste, deforestation, and forest conversion, demonstrate that the weakening of human–forest relations directly affects the sustainability of dance creation. Dance does not rely solely on the presence of physical space but on lived relations that shape embodied experience, imagination, and meaning. Once these relations break down, cultural practices wither and the foundational knowledge behind artistic creation begins to erode. As the conceptual findings suggest, when the forest ceases to function as a living space, both embodied experience and cultural

meaning fall into fragmentation. This fragmentation leads to dance practices that become increasingly disconnected from the lived practices of the communities from which they emerge. The sustainability of dance creation, therefore, cannot be separated from the continuity of human relations with the forest as a living space. Disruption of these relations presents a fundamental challenge for artistic creation and choreographic education rooted in the sociocultural context of Papua.

Discussion

The findings demonstrate that, in the Papuan context, forests function as living spaces that shape sociocultural relations, cosmological orientations, and embodied experience, while forming the foundation for the sustainability of dance creation. These relations operate through forest-based life practices such as food processing, mobility, wildlife stewardship, and Indigenous knowledge systems transmitted across generations. When these relations are disrupted through waste, deforestation, and forest conversion, the impact extends beyond physical ecology to the continuity of cultural practice and embodied experience that sustains dance creation. The sustainability of dance in Papua is therefore inseparable from the continuity of human–forest relations as lived space.

Comparable relational patterns are evident among the Korowai communities of inland Papua, where forests shape subsistence practices as well as residential architecture through tree-house construction, directly linking forest relations to bodily safety and spatial organisation (Fiharsono et al., 2024). Similar dynamics are observed among the Kamoro communities in coastal Mimika, where forests function as sources of food, ritual space, and artistic material, rendering forest conversion an immediate threat to cultural and artistic continuity (Anindhita et al., 2024). These cases reinforce the study's central finding that human–forest relations constitute a fundamental foundation for artistic creation. These relational patterns suggest that the role of the forest in Papuan artistic practice extends beyond specific cultural cases and points toward a broader epistemology of performance space.

In this context, it is important to recognise that Papuan dance practices operate within a different regime of performance space from that of Western theatrical traditions. While Western performance is largely situated within formalised stages that are spatially separated from everyday life, many Papuan dances emerge within lived landscapes, where forests, land, and natural environments function as integral performance spaces. Nature does not operate as a backdrop for representation, but as a constitutive condition through which movement, rhythm, and meaning are generated, sustained, and reproduced. The forest enables dance to emerge through everyday bodily engagement and to be transmitted across generations as embodied knowledge. Consequently, the erosion of forest relations weakens the experiential foundations that sustain the continuity of Papuan dance practices.

Comparable relational logics between humans, forests, and cultural practice are also evident beyond Papua. Literary analysis of Wole Soyinka's *A Dance of the Forests* demonstrates how forests function as symbolic and ethical spaces through which political memory, collective responsibility, and cultural self-reflection are articulated, extending the relevance of forest cosmology beyond its immediate historical context (Lawal, 2022). In Latin America, studies of Indigenous music and dance in Pastaza, Ecuador, show that bodily movement, costume, and artistic expression emerge from sustained sociocultural interaction with local environments, where artistic creation operates as a means of preserving heritage amid social change (Alejandra Longa-López et al., 2024).

Similarly, research on Aboriginal cultural burning practices in south-eastern Australia highlights forests as relational partners whose care requires ethical engagement, reciprocal knowledge exchange, and embodied practice rather than extractive management (Williamson, 2022). Ethnobotanical research in Oaxaca further reveals how ritual use of specific plants is inseparable from dance, ceremony, and spatial practice, demonstrating that artistic expression is embedded in ecological knowledge systems transmitted through ritual and bodily enactment (Calvo-Díaz et al., 2023). Across these diverse contexts, forests and plants are not treated as passive resources but as relational agents that shape cultural meaning, artistic imagination, and embodied practice, reinforcing the argument that artistic creation is grounded in lived ecological relations rather than abstract representation.

As a body-based practice, dance is deeply dependent on lived experience shaped by human relations with the environment. In Papua, the body is not an abstract entity but one that acquires meaning through engagement with the

forest as a living space. When the forest is understood as *mama*, an entity that gives, nurtures, and protects, this relation generates rich sensory, affective, and symbolic bodily experiences that are translated into artistic expression. Conversely, disruption of forest relations fragments embodied experience, narrowing the sources of imagery, rhythm, and meaning that support dance creation. These findings affirm the study's initial assumption that ecological change directly affects cultural and artistic practice rather than operating as a secondary consequence.

While aligning with scholarship on Indigenous knowledge and cultural ecology that frames nature as integral to social practice and identity, this study extends existing discussions by positioning the forest as an epistemic foundation of dance creation rather than as a cultural backdrop or thematic resource. Unlike approaches that treat environmental issues primarily as representational themes in art, this study demonstrates that ecological disruption operates at a deeper level, affecting embodied experience and the continuity of lived practices that underpin creative processes.

Based on these findings, three conceptual recommendations are proposed. First, context-based dance creation should be grounded in an understanding of lived relations between humans and their environments rather than relying solely on symbolic or thematic translation. Second, the sustainability of dance creation depends on the continuity of life practices that shape embodied experience, requiring deforestation and ecological disruption to be understood as relational crises that directly affect artistic imagination. Third, in arts education, human–forest relations as lived space can serve as a conceptual foundation for choreographic learning, enabling students to understand art as a lived practice rooted in relational experience rather than as a purely aesthetic product.

This study has several limitations. As a conceptual inquiry based on literature review and contextual reflection, it does not present direct empirical field data. In addition, cultural and artistic practices are examined at a relational–conceptual level, which does not fully capture individual variation and specific local dynamics. These limitations reflect a deliberate methodological choice, as the study prioritises conceptual framework development over representative empirical mapping.

Future research is encouraged to pursue empirical studies that examine how disruptions to forest relations affect artistic creation at both community and individual levels. Further work may also explore how relational ecological approaches can be integrated into choreographic pedagogy, including how students translate environmental issues into movement structure, spatial design, and dance dramaturgy. Interdisciplinary research connecting art, ecology, and cultural education may further deepen understanding of the role of performing arts in addressing sustainability challenges.

CONCLUSION

This study demonstrates that Indonesia's existing agrarian law framework remains inadequate to regulate subsurface ownership and vertical depth boundaries in response to the growing use of underground space. Although the Basic Agrarian Law and Government Regulation No. 18 of 2021 acknowledge that land rights may extend above and below the surface, they do not provide clear standards on the legal extent of such rights, measurable depth limits, registration procedures, or the juridical status of subsurface parcels. This creates a normative vacuum that weakens legal certainty, complicates land administration, increases the risk of overlapping claims, and limits the effective use of underground space for infrastructure, utilities, and urban development.

The findings further show that the absence of clear subsurface regulation has broader legal, institutional, environmental, and social consequences. Without explicit vertical demarcation, landowners, developers, and state authorities may assert competing claims over the same underground space. The lack of a three-dimensional cadastre prevents underground parcels from being properly mapped, registered, transferred, or used as collateral. At the same time, fragmented institutional authority, insufficient environmental safeguards, and limited protection for customary communities create further challenges for sustainable and equitable subsurface governance.

Comparative experiences from Japan, Singapore, and South Korea show that effective underground space governance requires clear statutory depth limits, recognition of independent subsurface rights, and a land administration system

capable of recording three-dimensional property interests. These models indicate that Indonesia should move beyond a surface-based conception of land rights and develop a vertically integrated regulatory framework that balances private ownership, public interest, investment certainty, environmental protection, and community rights.

Accordingly, this article recommends the development of a comprehensive legal regime governing subsurface ownership and vertical land demarcation. Such reform should include the establishment of measurable vertical boundaries, the introduction of a dedicated Right to Subsurface Space, the implementation of a standardised three-dimensional cadastre, clearer institutional coordination, environmental and social safeguards, and effective dispute-resolution mechanisms. These reforms are essential to ensure that Indonesia's future underground development proceeds with legal certainty, administrative coherence, social justice, and environmental sustainability.

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Analysis of Posyandu Advisory Team Role in Preparing Six Minimum Service Standards Transformation

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ABSTRACT

The transformation of Posyandu based on the six Minimum Service Standards (SPM) is a strategic initiative to strengthen integrated community-based public services. However, its implementation in East Kalimantan Province remains at an early stage and faces challenges related to institutional readiness, human resource capacity, and cross-sectoral coordination. Therefore, this study aims to examine the role of the Posyandu Development Team in supporting the preparation for the implementation of SPM-based Posyandu. This study employed a descriptive qualitative approach. Data were collected through in-depth interviews, observations, and documentation involving nine purposively selected informants, consisting of three members of the Posyandu Development Team and six Posyandu cadres. The data were analyzed using an interactive model involving data reduction, data display, and conclusion drawing. The findings indicate that the implementation of SPM-based Posyandu has not yet been fully supported by adequate institutional readiness and human resource capacity at the regional level. The Posyandu Development Team plays significant roles as a regulator, facilitator, and dynamizer through monitoring and evaluation, capacity building, cross-sectoral coordination, and efforts to enhance community participation. These findings contribute to a better understanding of the strategic role of the Posyandu Development Team in supporting the implementation of SPM-based Posyandu and provide practical recommendations for strengthening institutional capacity, improving cross-sectoral coordination, and enhancing community participation.

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INTRODUCTION

Community development is a process aimed at improving quality of life and overall well-being through the active participation of communities in various development initiatives (Darwis et al., 2022; McMahon et al., 2021). In contemporary development approaches, communities are no longer positioned merely as beneficiaries, but as active agents who play a role in shaping the direction of development within their own environments. Therefore, community empowerment becomes a crucial component of community-based development, encompassing efforts such as enabling, strengthening, protecting, supporting, and sustaining, all of which aim to foster independence and enhance the capacity of communities to identify and address the social issues they face (Dewanto et al., 2024). Through effective coordination, various basic services can be integrated at the community level, allowing Posyandu to function not only as a health service provider but also as a center for basic social services at the village or sub-district level. This is further reinforced by active community participation, which contributes to increased social capacity, trust, and the sustainability of community-based programs (Surtimanah, 2024; Lukito, 2024).

The provision of accessible basic services through community-based mechanisms becomes highly essential. A community-based service approach emphasizes the active involvement of communities in the processes of planning, implementation, and evaluation of development programs. This perspective aligns with Ahmad et al. (2025), who highlight that community-based development positions the community as the primary actor in the development process. In practice, this approach is reflected in the role of Community Health Workers (CHWs), who serve as a bridge between

communities and formal health systems through activities such as health education, child growth monitoring, disease prevention, and referrals to healthcare facilities (Buthelezi et al., 2025). This role is consistent with global research findings indicating that CHWs make significant contributions to improving access to basic healthcare services and strengthening community empowerment across various developing country contexts. Furthermore, CHWs play a vital role in bridging gaps between communities and formal healthcare systems through community-oriented approaches that are promotive, preventive, and socially driven (Nida et al., 2024).

In Indonesia, one of the prominent forms of community-based services at the grassroots level is the Integrated Service Post (Posyandu). Posyandu is part of Community-Based Health Efforts (UKBM), which are managed by, from, for, and with the community. It functions not only as a provider of basic health services but also as a platform for community empowerment, aiming to enhance awareness and participation in local development (Ministry of Health of the Republic of Indonesia, 2011). Over time, Posyandu has been formally recognized as part of Village Community Institutions (LKD), highlighting its strategic role as a partner of the government in delivering public services at the local level.

According to the Posyandu Strategic Plan 2025–2029, Posyandu is directed to support the delivery of basic services across six Minimum Service Standard (SPM) sectors, namely education, health, public works, housing, public order and safety, and social affairs. This policy reflects a transformation in the function of Posyandu, shifting from a limited health service provider to an integrated, community-based service center that addresses multiple dimensions of welfare (Ministry of Health of the Republic of Indonesia, 2025). However, in practice, public perception often still limits Posyandu to a health service facility, indicating that this expanded role has not yet been fully understood.

The strengthening of this role is further emphasized through the Regulation of the Minister of Home Affairs Number 13 of 2024, which formally designates Posyandu as part of Village and Sub-district Community Institutions. Within this regulatory framework, Posyandu holds a strategic function in supporting the integrated delivery of basic public services at the local level. This policy reflects a significant transformation in the role of Posyandu, expanding beyond its traditional focus on health services to become a community-based integrated service center that operates across multiple sectors (Ministry of Home Affairs of the Republic of Indonesia, 2024).

In the context of implementing community-based programs, cross-sectoral coordination emerges as a critical factor for success. Various international studies indicate that the effectiveness of such programs is strongly influenced by the quality of planning, coordination, and partnerships among stakeholders, as well as active community participation (Aberese-Ako et al., 2024; Afzal et al., 2021; Gilmore et al., 2020). Therefore, the Posyandu Development Team holds a strategic position in supporting the preparation for policy implementation through its roles in guidance, coordination, and strengthening the capacity of cadres and communities, ensuring that the transformation of Posyandu can be carried out effectively.

Conceptually, roles are understood as the dynamic aspects of social positions that reflect functions, responsibilities, and expected patterns of behavior performed by individuals or groups within a social structure (Anglin et al., 2022). In this study, the role of the Posyandu Development Team is operationalized as encompassing facilitative, coordinative, and supervisory functions in supporting the preparation for the implementation of Posyandu based on the six Minimum Service Standards. In addition, the success of program implementation largely depends on the capacity of and support provided to cadres as frontline implementers. Previous studies indicate that limited facilities, high workloads, and insufficient supervision are among the primary challenges affecting the performance of Community Health Workers in various countries (Nida et al., 2024).

Nevertheless, the implementation of Posyandu based on the six Minimum Service Standards continues to face various challenges. Posyandu is still frequently perceived as a service limited to maternal and child health, resulting in its multidimensional functions not being fully understood by the community. In addition, constraints such as limited human resource capacity, suboptimal cross-sectoral coordination, and varying levels of understanding across regions hinder the implementation process. These findings are consistent with Fikroh et al. (2025), which highlight that technical constraints and limited resources remain major barriers to optimizing Posyandu services. This is further supported by international studies emphasizing that limited institutional capacity and resource constraints are key challenges in the implementation of community-based programs (Mishra et al., 2022).

In East Kalimantan Province, the preparation for implementing the transformation of Posyandu based on the six Minimum Service Standards is still at an early stage, primarily characterized by socialization activities and cross-sectoral coordination. This condition indicates a gap between established policies and the readiness of implementation at the local level. It also reflects that community-based program implementation continues to encounter various challenges, particularly in terms of suboptimal community engagement. Although community participation is a key element in sustainable development, in practice such involvement often remains limited and does not yet fully reflect a comprehensive empowerment process (Fadli et al., 2021; Aberese-Ako et al., 2024).

However, studies that specifically examine the role of the Posyandu Development Team during the initial phase of preparing the implementation of Posyandu based on the six Minimum Service Standards at the regional level remain limited. Therefore, this study seeks to address this gap by analyzing the role of the Posyandu Development Team in supporting the early-stage implementation process.

Based on these conditions, this study is considered important to examine the role of the Posyandu Development Team in supporting the preparation for the implementation of Posyandu transformation based on the six Minimum Service Standards (SPM) in East Kalimantan. This study is designed to address the following research questions: (1) How does the Posyandu Development Team contribute to accelerating and preparing the implementation of SPM-based Posyandu, and (2) What forms of guidance and coordination are carried out in this process?

This study is grounded in the assumption that the Posyandu Development Team plays a strategic role as a facilitator, coordinator, and capacity builder in supporting the successful preparation for the implementation of Posyandu transformation at the community level.

METHODS

This study employed a qualitative approach with a descriptive research design to explore in depth the role of the Posyandu Development Team in supporting the preparation for implementing Posyandu based on the six Minimum Service Standards (SPM) in East Kalimantan Province. A qualitative approach was chosen as it enables a contextual understanding of social phenomena and allows for deeper interpretation of the processes of guidance, coordination, and policy implementation dynamics at the local level (Sugiyono, 2013).

The research was conducted in Penajam Paser Utara Regency (PPU) from March to April 2026. The informants consisted of three members of the Posyandu Development Team and six Posyandu cadres, selected purposively based on their active involvement in the acceleration and preparation process of SPM-based Posyandu implementation. The selected cadres were active participants directly engaged in Posyandu activities at the community level.

Data were collected through in-depth interviews with nine purposively selected informants consisting of three members of the Posyandu Development Team and six Posyandu cadres, observation, and documentation. In-depth interviews were carried out to obtain detailed information regarding the roles, forms of guidance, and coordination undertaken by the Posyandu Development Team. Observations were conducted through the researcher's participation in coordination meetings and acceleration forums related to the implementation of Posyandu based on the six SPM, involving both provincial and district-level Posyandu Development Teams. Additional observations took place during field visits by the Posyandu Development Team to relevant local institutions, such as the Office of Community and Village Empowerment (DPMD), to capture the coordination processes and the dynamics of program implementation at the regional level. Documentation involved collecting supporting materials, including meeting minutes, activity reports, and documents related to the implementation of SPM-based Posyandu, which were used to complement and validate the findings from interviews and observations.

Data analysis was conducted qualitatively using an inductive approach through several stages, namely data reduction, data display, and conclusion drawing and verification. Data reduction involved selecting and focusing on relevant information, while data display was organized into systematic narrative descriptions. Conclusions were drawn by interpreting the meaning of the data in relation to the research objectives (Sugiyono, 2013).

To ensure data validity, this study applied source triangulation and methodological triangulation by comparing findings obtained from interviews, observations, and documentation. In addition, repeated verification processes were carried

out to ensure data consistency and accuracy, thereby enhancing the credibility and trustworthiness of the research findings.

RESULTS AND DISCUSSION

The findings of this study indicate that the implementation of Posyandu based on the six Minimum Service Standards (SPM) in East Kalimantan is still in a phase of adjustment and system strengthening. This suggests that the transformation process has not yet been fully supported by adequate institutional readiness and resource capacity at the regional level.

The Posyandu Development Team represents an institutional structure established across multiple levels of government, ranging from the national to the village/sub-district level. Its primary responsibilities include providing guidance, facilitating coordination, and strengthening the implementation of Posyandu to ensure more effective service delivery. The composition of the team involves various stakeholders, including local government authorities, relevant sectoral agencies, Family Welfare Empowerment (PKK) organizations, and other community elements actively engaged in the development of Posyandu.

Findings from interviews with members of the Provincial Posyandu Development Team reveal that their roles are primarily centered on monitoring, evaluation, and cross-level coordination, spanning from district/city governments down to the village level. In addition, they ensure that administrative procedures and the registration process of Posyandu are carried out in accordance with guidelines established by the central government.

Observational data further indicate that the Provincial Posyandu Development Team actively conducts field visits to areas that still face limitations in data management and program implementation. During these visits, the team provides technical guidance related to task distribution across the six SPM sectors and assists local governments in addressing implementation challenges. Coordination mechanisms are carried out through direct meetings, remote communication, and the dissemination of official circular letters or directives.

Moreover, observations during coordination meetings for accelerating the implementation of Posyandu based on the six SPM show that several regions continue to encounter obstacles, including a shortage of implementing personnel and uneven levels of understanding among cadres regarding the expanded functions of Posyandu. These findings indicate that, despite ongoing efforts, capacity gaps and coordination challenges remain significant issues in the early stages of implementation.

Interviews with Posyandu cadres indicate that support from the Posyandu Development Team is provided through training programs, socialization activities, and the provision of supporting tools for Posyandu implementation. The cadres also reported that efforts to increase community participation are carried out through direct information dissemination as well as through communication platforms such as WhatsApp groups.

However, the findings also reveal several ongoing challenges. Community attendance at Posyandu activities has shown a declining trend, and cadres' understanding of all SPM sectors remains uneven. This suggests that, while capacity-building initiatives have been implemented, their effectiveness in ensuring comprehensive understanding and sustained community engagement has not yet been fully achieved.

The Role of the Posyandu Development Team as Regulator

The findings indicate that the Provincial Posyandu Development Team performs its regulatory function through monitoring, evaluation, and supervision of the implementation of Posyandu based on the six Minimum Service Standards (SPM). This role is reflected in the formulation of guidelines, the provision of technical direction, and oversight of program implementation at the local level (Firdaus, 2020).

These results suggest that the regulatory role extends beyond administrative functions and encompasses operational responsibilities in ensuring that program implementation aligns with established standards at the regional level. Furthermore, this role is evident in efforts to accelerate implementation through coordination across different levels of government. This indicates that regulatory functions are not merely directive but also facilitative in maintaining policy coherence and implementation consistency across regions.

This finding is further supported by statements from informants, who noted that the Posyandu Development Team “conducts monitoring, evaluation, accelerates implementation, and assists local governments in addressing challenges down to the sub-district and village levels.” This indicates that the regulatory role is adaptive, responding to local conditions that are still in a transitional phase of implementation.

Insights from cadres also reinforce this role. As one cadre expressed, the team “plays a very significant role in every stage of implementation and greatly contributes to improving community health, especially at the local level.” This highlights that the presence of the Provincial Posyandu Development Team extends beyond administrative functions and has a tangible impact on the implementation of Posyandu activities at the grassroots level.



Picture 1: Field Visit to the Office of Community and Village Empowerment (DPMD) in Penajam Paser Utara, East Kalimantan, Indonesia.
Author's Documentation (2026) [source]

In addition, observational findings indicate that during coordination activities at the district and municipal levels, the Provincial Posyandu Development Team provides guidance on the implementation of each sector within the six SPM framework. Several regions still experience uncertainty regarding the distribution of roles across sectors, highlighting the importance of the team's presence in clarifying policy directions and ensuring that implementation aligns with established guidelines.

The findings also reveal that, in the early stages of implementation, several challenges persist, including issues related to data collection, registration processes, and institutional adjustments of Posyandu in certain areas. Therefore, the regulatory role extends beyond policy dissemination to include supervisory and mentoring functions, ensuring that program implementation progresses gradually and in accordance with the required standards.

From an analytical perspective, these findings suggest that the regulatory role is inherently adaptive, functioning not only as a policy-directing mechanism but also as a supervisory and facilitative force throughout the implementation process. This study extends previous research by highlighting the strategic regulatory role of the Posyandu Development Team during the early preparation stage of SPM-based Posyandu implementation, with particular emphasis on institutional readiness and cross-sectoral coordination.

When linked to previous studies, these findings are consistent with those of Danang et al. (2025), who emphasized the importance of institutional roles in supporting the implementation of Posyandu based on the six SPM. However, this study further highlights that the regulatory role at the provincial level is not merely administrative but also adaptive to local conditions that are still undergoing transitional changes.

The Role of the Posyandu Development Team as Facilitator

The findings reveal that the Provincial Posyandu Development Team has carried out its facilitative role through various forms of support directed at both cadres and local governments. This support includes the provision of information, guidance through strategic planning documents, and assistance in the provision of facilities and infrastructure required for Posyandu implementation. This is supported by an informant's statement indicating that “guidelines from the central government are coordinated down to the district, sub-district, and village levels. In addition, we conduct capacity building, socialization, and provide support for facilities to ensure that Posyandu based on the six SPM operates

according to established standards.” This highlights that the facilitative role is not merely normative but is also reflected in concrete support at the implementation level.

Based on interview findings, informants emphasized that the provincial team does not only provide direction but is also directly involved in addressing challenges encountered in the field. This is further reinforced by statements from cadres, who noted that “we are involved in training activities and supported through the provision of equipment.” In addition, efforts to enhance community participation are carried out by cadres through information dissemination via WhatsApp groups, along with motivational approaches and guidance on the importance of attending Posyandu activities.

However, the study also identifies several constraints affecting the facilitative role. One of the primary challenges lies in the limited understanding among cadres regarding the six SPM framework, which is relatively new. Certain sectors, such as housing, are perceived as more difficult to implement due to the need for broader cross-sectoral understanding and coordination.

When compared to previous studies, such as Muhlizardy et al. (2024), which emphasize the importance of training in enhancing cadre capacity, the findings of this study suggest that facilitation should not be limited to training alone. Instead, it needs to be complemented by continuous mentoring and support to ensure that cadres are able to effectively implement the program in practice.

The Role of the Posyandu Development Team as Dynamizer

The role of a dynamizer in the context of community empowerment is closely related to efforts aimed at encouraging active community participation and fostering a sense of engagement in program implementation. This role is essential to ensure that programs are not merely carried out at an administrative level, but are also supported by meaningful involvement from the community (Azkiya et al., 2025).



Picture 2: Coordination Meeting on the Acceleration of Posyandu Implementation
Involving the Posyandu Development Team and District/City Cadres
Author's Documentation (2026) [source]

Based on the findings, the Provincial Posyandu Development Team has sought to perform this dynamizing role through socialization activities, coordination efforts, and direct involvement in encouraging the participation of both cadres and community members. Informants reported that various approaches have been employed to motivate community engagement in Posyandu activities, including direct communication strategies and mobilization through village-level cadres.

However, interviews with Posyandu cadres indicate that community participation remains a significant challenge in implementing Posyandu based on the six Minimum Service Standards (SPM). Limited community participation appears to be influenced by multiple factors, particularly the ongoing transformation of Posyandu services, which now encompass broader sectors that are not yet fully understood by the community. As expressed by one cadre, "there is still a lack of awareness among community members, and fewer people are attending Posyandu activities."

This finding is consistent with statements from the Provincial Posyandu Development Team, which highlighted that “there are still challenges at the Posyandu level, including limited cadre capacity, uneven socialization, and inconsistent

provision of incentives depending on regional capacity.” These conditions indicate that challenges in Posyandu implementation are not solely related to community participation but are also linked to human resource readiness, local policy support, and disparities in the dissemination of information regarding the six service sectors.

Furthermore, observational findings show that during several activities, the Posyandu Development Team actively provides motivation and guidance to cadres to sustain routine Posyandu operations. This suggests that the dynamizing role is directed not only toward the community but also toward cadres as key frontline implementers. This finding aligns with Buthelezi et al. (2025), which emphasizes the importance of community-based workers in enhancing public engagement. However, within the context of this study, community participation challenges remain substantial, indicating the need for more innovative and sustainable strategies to strengthen community involvement.

Forms of Guidance by the Posyandu Development Team

Theoretically, guidance or capacity-building refers to a continuous process aimed at enhancing the capabilities of individuals or groups in carrying out their roles and responsibilities. Such efforts are commonly implemented through training programs, mentoring, and the provision of technical guidance (Asampong et al., 2023).



Picture 3: Interview with the Provincial Posyandu Development Team
Author's Documentation (2026) [source]

The findings indicate that capacity-building efforts carried out by the Provincial Posyandu Development Team have been implemented through various activities, including socialization programs, cadre training, and direct field mentoring. This is supported by a statement from a team member, who explained that “specific socialization activities are conducted for cadres, and in 2025, joint sessions were held across several districts to ensure their understanding of all six sectors.”

In addition, cadres reported that the guidance provided involves continuous forms of support. As expressed by one cadre, “training, provision of equipment, and socialization are consistently provided. This includes skill-based training, uniforms, and transportation support, as well as opportunities to participate in training and equipment procurement.” These findings suggest that capacity-building efforts are not limited to knowledge transfer but also include material and logistical support to enhance implementation at the community level.

Field observations further reveal that during coordination activities, the Posyandu Development Team directly provides explanations regarding the distribution of roles across the six SPM sectors. This is particularly important given that many cadres and local staff still have an incomplete understanding of how the program should be implemented in practice.

However, the study also highlights that capacity-building efforts require further improvement, particularly in terms of intensity and equitable distribution. Variations in levels of understanding across regions indicate the need for more context-specific approaches, tailored to the conditions and capacities of each locality, in order to ensure more effective and consistent implementation.

Forms of Coordination by the Posyandu Development Team

Coordination is a crucial aspect in the implementation of Posyandu programs. It refers to the process of aligning activities among various stakeholders involved in a program to ensure that implementation is integrated and to avoid overlaps in roles and functions (Amaruddin et al., 2024). In the context of Posyandu based on the six Minimum Service Standards (SPM), coordination becomes even more essential due to the involvement of multiple sectors and institutions.

The findings indicate that coordination carried out by the Provincial Posyandu Development Team involves a range of stakeholders, including the Health Office, Education Office, Social Affairs Office, Public Works and Housing (PUPR), and the Civil Service Police Unit (Satpol PP). As stated by an informant, “we involve sectoral agencies such as health, education, public works, social affairs, and public order institutions so that all relevant sectors can support Posyandu.” Coordination is conducted through various mechanisms, including field visits, telephone communication, and the dissemination of official circular letters or directives.

However, observational findings reveal that cross-sectoral coordination remains a significant challenge, particularly in terms of role distribution and clarity of responsibilities among sectors. In several cases, there is still uncertainty regarding which institution is responsible for addressing specific issues that arise at the community level.

Despite these challenges, the coordination efforts undertaken by the Posyandu Development Team demonstrate an emerging synergy among stakeholders, although further strengthening is still required. These findings reinforce the importance of institutional coordination in community-based service implementation and suggest that strengthening cross-sectoral coordination and clarifying stakeholder roles are essential for improving the implementation of SPM-based Posyandu.

CONCLUSION

This study highlights the significant role of the Posyandu Development Team in supporting the preparation for implementing Posyandu based on the six Minimum Service Standards (SPM) in East Kalimantan. The roles as regulator, facilitator, and dynamizer have been carried out through monitoring and evaluation activities, capacity-building efforts for cadres, and initiatives aimed at encouraging community participation. However, the implementation process remains at an early stage and has not yet reached optimal performance.

The main challenges identified include limited cadre capacity, uneven understanding of the six SPM sectors, and ineffective cross-sectoral coordination. These findings suggest that the success of Posyandu transformation is highly dependent on institutional readiness and the strengthening of human resources at the local level.

This study draws strength from its empirical data collected directly from field observations and stakeholder experiences. Nevertheless, its scope is limited to a specific region, which restricts the generalizability of the findings. Practically, this study provides important implications for local governments and Posyandu Development Teams to enhance cross-sector coordination strategies, continuously strengthen cadre capacity, and optimize community outreach efforts. Future research is recommended to examine the implementation of SPM-based Posyandu across diverse regional contexts using more comprehensive approaches.

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Urgency of Developing New Regulatory Norms on Subsurface Ownership and Vertical Depth Boundaries in the National Agrarian Law System

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ABSTRACT

This article examines the urgency of developing new regulatory norms governing subsurface ownership and vertical depth boundaries within Indonesia's national agrarian law system. The study is driven by the absence of explicit legal provisions defining the scope, limitations, and ownership status of underground space, which creates legal uncertainty and potential conflicts in land utilisation, infrastructure development, and urban planning. Utilising a normative juridical method supported by statute, conceptual, and comparative approaches, this research analyses the insufficiency of existing regulations under the Basic Agrarian Law (UUPA), particularly regarding vertical land demarcation and the doctrine of horizontal separation. The findings demonstrate that the current legal framework does not adequately regulate subsurface rights, resulting in normative gaps related to depth limits, administrative procedures, legal protection, and allocation of underground space for public and private interests. The study concludes that Indonesia urgently requires a new normative framework, potentially through the recognition of a distinct Right to Subsurface Space to ensure legal certainty, prevent future ownership disputes, and support sustainable spatial planning.

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INTRODUCTION

Rapid urban population growth in Indonesia has significantly intensified pressure on land availability, particularly in metropolitan areas where horizontal expansion is increasingly constrained. This condition has compelled policymakers and urban planners to explore alternative spatial utilisation strategies, including the systematic use of subsurface space for infrastructure, transportation systems, utilities, and commercial activities. In contemporary urban development discourse, land is no longer understood merely as a two-dimensional surface but as a three-dimensional spatial entity that can be managed vertically, both upward and downward, to achieve efficiency and sustainability in land use (Sorensen & Okata, 2011; Tan & Zhao, 2020).

However, Indonesia's agrarian legal framework has not evolved in parallel with these spatial transformations. The Basic Agrarian Law of 1960 (Undang-Undang Pokok Agraria/UUPA) remains predominantly surface-oriented and does not provide explicit regulation concerning subsurface ownership or vertical depth boundaries. Although the UUPA conceptually acknowledges that land rights extend above and below the surface "as far as necessary for the use of the land," this formulation is functional rather than normative and fails to establish measurable limits of ownership or distinguish between private and public subsurface interests (Harsono, 2008; Sumardjono, 2015). As a result, underground development in Indonesia operates within a legal grey area that undermines certainty in land administration, spatial planning, and infrastructure investment.

From a theoretical standpoint, modern land law scholarship emphasises the importance of vertical land demarcation and the operationalisation of the horizontal separation principle (*horizontale scheiding*). This doctrine recognises that legal

rights over land may be separated according to spatial layers above, on, or below the surface, rather than being treated as a single, indivisible object (Qiao, 2022; Wicaksono, 2020). In comparative perspective, several jurisdictions such as Japan, Singapore, and South Korea have translated this doctrine into positive law by establishing statutory depth limits and classifying deep subsurface space as part of the public domain. Such regulatory models allow the state to manage underground space independently of surface ownership, thereby reducing overlapping claims and facilitating large-scale underground infrastructure development (Ariga & Zheng, 2017; Tan & Zhao, 2020).

In contrast, Indonesia has yet to adopt a comparable legal approach. The absence of explicit statutory norms governing subsurface ownership has created a normative vacuum with serious legal implications. There is no clear determination of how deep private land rights extend, no recognition of subsurface parcels as independent legal objects, and no comprehensive administrative mechanism for registering underground space within the national land registration system. This condition increases the likelihood of conflicts between surface landowners, developers, and state authorities, particularly in projects involving tunnels, underground utilities, and deep foundations (Hermawan & Hananto, 2021; Hashami & Octariana, 2023). Legal uncertainty is further exacerbated in public–private partnership schemes, where investors require predictable and enforceable rights over subsurface space to secure financing and allocate risk effectively (Hajati, 2018).

Based on these conditions, the central legal problem addressed in this study concerns the absence and ambiguity of regulatory norms governing subsurface ownership and vertical depth boundaries within Indonesia's national agrarian law system. Existing regulations, including Government Regulation No. 18 of 2021, have begun to conceptually recognise underground space as an object of land rights, yet they fail to provide operational standards concerning depth limits, volumetric demarcation, registration procedures, and the allocation of subsurface space for public and private purposes (Hermawan & Hananto, 2021; Abdullah & Purbawa, 2020). This regulatory insufficiency hinders legal certainty and weakens the capacity of spatial planning law to respond to contemporary urban development needs.

To address this problem, this research adopts a normative legal research approach that emphasises doctrinal analysis and legal reasoning. The problem-solving plan involves the use of statutory, conceptual, and analytical approaches to examine existing agrarian and spatial planning regulations, relevant legal doctrines, and comparative regulatory models. Through this method, the study seeks to identify normative gaps and doctrinal inconsistencies while constructing legal arguments for the development of new regulatory instruments governing subsurface ownership and vertical land demarcation (Marzuki, 2005; Hutchinson & Duncan, 2012).

Accordingly, this research aims to achieve three primary objectives. First, it seeks to analyse the adequacy of Indonesia's current agrarian law framework in regulating subsurface ownership and vertical land boundaries. Second, it aims to examine theoretical and comparative perspectives on underground space regulation as a basis for legal reform. Third, it endeavours to formulate normative recommendations for the establishment of a comprehensive legal regime governing subsurface ownership, including the possible recognition of a distinct right to subsurface space, to enhance legal certainty, prevent future land disputes, and support sustainable three-dimensional spatial planning in Indonesia (Qiao, 2022; Tan & Zhao, 2020).

METHODS

This study employs a normative legal research approach, as the central issue examined concerns the absence and ambiguity of legal norms regulating subsurface ownership and vertical depth boundaries within Indonesia's agrarian law system. Normative legal research is particularly appropriate when the objective of the study is to analyse legal deficiencies, inconsistencies, or the need for normative reconstruction, rather than to measure social behaviour or empirical phenomena. This method relies on authoritative legal sources, doctrinal interpretation, and systematic legal reasoning to assess the adequacy of existing regulations and propose normative solutions (Marzuki, 2005; Soekanto & Mamudji, 2011).

The research is conducted through several interrelated analytical approaches. A statutory approach is applied to examine positive law governing land rights and spatial planning, with particular attention to the Basic Agrarian Law (Undang-Undang Pokok Agraria/UUPA), Government Regulation No. 18 of 2021, and other relevant implementing regulations. This approach enables an evaluation of the extent to which existing legislation provides legal certainty regarding subsurface ownership and vertical land demarcation (Harsono, 2008; Hermawan & Hananto, 2021). In addition, a conceptual approach is employed to analyse legal doctrines and theoretical frameworks related to vertical land delineation, the principle of horizontal separation (*horizontale scheiding*), and the juridical status of subsurface space within modern land law (Qiao, 2022; Wicaksono, 2020). An analytical approach is further used to assess normative coherence, identify regulatory gaps, and construct legal arguments supporting the development of new regulatory instruments governing subsurface ownership.

The legal materials used in this study are classified into three categories. Primary legal materials consist of statutes, government regulations, and other binding legal instruments relevant to agrarian law and spatial planning. Secondary legal materials include textbooks, peer-reviewed journal articles, and scholarly commentaries authored by legal experts that discuss land law, underground space regulation, and legal certainty. Tertiary legal materials, such as legal dictionaries and encyclopedias, are utilised to clarify legal concepts and terminology. The collection of legal materials is conducted through a document analysis method, involving a systematic review of legislative texts and doctrinal writings (Ibrahim, 2006; Hutchinson & Duncan, 2012).

All legal materials are analysed qualitatively using a normative juridical method that emphasises doctrinal interpretation, comparative analysis of scholarly opinions, and deductive legal reasoning. Through this analytical process, the study identifies conceptual weaknesses and normative inconsistencies within the existing legal framework and formulates recommendations for the establishment of clearer legal norms concerning subsurface boundaries and proprietary rights. This approach allows the research to contribute to the development of a coherent regulatory framework that enhances legal certainty and supports sustainable three-dimensional spatial governance in Indonesia (Sumardjono, 2015; Tan & Zhao, 2020).

RESULTS AND DISCUSSION

The Impact of the Vacuum of Norm on Legal Certainty in Subsurface Ownership

The absence of a clear and comprehensive legal framework regulating subsurface ownership in Indonesia has created a significant normative vacuum that directly affects legal certainty, predictability, and the governance of underground space. Although the Basic Agrarian Law (UUPA) conceptually recognises that land rights extend both upward and downward “as far as necessary for the use of the land,” this provision lacks operational definitions and cannot function as a robust legal basis for determining vertical ownership limits. Consequently, the scope of private land rights beneath the surface remains vague and inconsistent, a condition that becomes increasingly problematic as rapid urbanisation and infrastructural development intensify the demand for underground construction such as subway tunnels, basements, utility corridors, and drainage systems (Harsono, 2008; Sumardjono, 2015). Legal scholars have consistently noted that Indonesia’s land law framework is not yet equipped to regulate three-dimensional property relationships systematically (Qiao, 2022; Hermawan & Hananto, 2021).

This normative vacuum generates multiple layers of ambiguity. In the absence of statutory depth limits or explicit subsurface rights, landowners cannot ascertain the precise vertical scope of their ownership. The doctrine of horizontal separation, which acknowledges that different legal rights may apply to spaces above and below the surface, has never been fully operationalised within Indonesian positive law, thereby increasing the risk of overlapping claims and underground trespass (Wicaksono, 2020; Hashami & Octariana, 2023). As a result, developers constructing deep foundations or tunnels may unintentionally interfere with subsurface space presumed to be controlled by surface landowners, leading to legal disputes. At the same time, government authorities face uncertainty in determining whether underground space must be acquired, compensated, or merely regulated, due to the absence of a legal distinction between shallow and deep subsurface use (Hermawan & Hananto, 2021).

The normative vacuum also obstructs the development of a three-dimensional (3D) cadastre system. A functional 3D cadastre requires clearly defined legal boundaries for volumetric parcels, which are currently unavailable in Indonesia. Although Government Regulation No. 18 of 2021 introduces underground space as an object of land rights, it does not provide technical standards concerning measurement, mapping, registration, or depth zoning. In contrast, jurisdictions such as Singapore and Japan have adopted explicit statutory demarcations that support detailed underground registration systems (Abdullah & Purbawa, 2020; Ariga & Zheng, 2017). Without similar rules, Indonesia is unable to issue subsurface titles that are legally recognised within the land administration system. As a consequence, underground parcels cannot be registered, transferred, used as collateral, or effectively integrated into spatial planning, significantly limiting their economic and administrative utility (Tan & Zhao, 2020).

Legal risks for investors and developers are also amplified under conditions of normative uncertainty. Financing underground infrastructure projects typically requires formal and enforceable proof of subsurface rights, which Indonesia's legal system is currently unable to provide. Liability issues arising from underground construction such as damage to adjacent structures or interference with existing utilities remain unclear due to the absence of legal norms defining responsibility for subsurface encroachment. As a result, contractual arrangements for underground projects, including build–operate–transfer schemes and public–private partnerships, lack stability and predictability, increasing transaction costs and discouraging investment (Hajati, 2018; Tan & Zhao, 2020).

Furthermore, the normative vacuum intensifies conflict between public and private interests. Unlike legal systems that classify subsurface space beyond a certain depth as part of the public domain, Indonesia leaves this issue unresolved. Consequently, surface landowners, government agencies, and private developers may simultaneously assert authority over the same underground space based on differing legal interpretations. Such overlapping claims elevate the likelihood of litigation and may delay the implementation of strategic national infrastructure projects (Hermawan & Hananto, 2021; Qiao, 2022).

Spatial planning governance is similarly impaired. Although Indonesia's spatial planning regime envisions integrated surface and subsurface zoning, local governments are unable to implement underground zoning policies due to the absence of clearly defined subsurface property rights. Environmental impact assessments (AMDAL) for underground projects also lack standardised criteria concerning permissible depths, geological stability, and environmental risk thresholds. Given the growing importance of underground flood control systems, urban drainage networks, and climate-resilience infrastructure, regulatory uncertainty undermines long-term planning and disaster mitigation efforts (Sugiarto & Winarso, 2019; Afifah et al., 2018).

The normative vacuum further exposes customary and indigenous communities to heightened legal vulnerability. In many customary legal systems, land rights extend beyond the surface to include subsurface elements that hold cultural, spiritual, or communal significance. In the absence of explicit statutory protection, customary communities may be excluded from consultation processes or compensation mechanisms when subsurface land is utilised for development, increasing the risk of dispossession and reinforcing structural power imbalances. This condition runs counter to constitutional guarantees concerning the protection of customary rights (Elvinda, 2021; UUD 1945, Article 18B paragraph (2)).

Environmental governance is likewise weakened by the absence of subsurface regulation. Underground construction poses serious risks, including groundwater contamination, land subsidence, and ecological disruption. However, environmental authorities lack normative guidance regarding depth limits, geological standards, and monitoring obligations. This regulatory gap permits environmentally harmful underground practices to occur without adequate oversight, creating long-term environmental hazards for both ecosystems and human settlements (Sugiarto & Winarso, 2019).

Finally, the normative vacuum contributes to fragmented institutional authority. Multiple ministries and agencies responsible for land administration, spatial planning, mining, public works, and environmental protection exercise overlapping or partial jurisdiction over subsurface space. In the absence of a unified legal framework, coordination

among institutions remains weak, regulatory mandates overlap, and no single authority holds definitive responsibility for subsurface governance. This fragmentation further exacerbates legal uncertainty and diminishes the effectiveness of land administration as a whole (Hermawan & Hananto, 2021; Sumardjono, 2015).

Taken together, the normative vacuum surrounding subsurface ownership significantly undermines legal certainty in Indonesia. Without clear legal norms, vertical boundaries remain ambiguous, registration of underground rights is unattainable, investor confidence declines, public infrastructure development encounters legal obstacles, environmental protection lacks coherence, and vulnerable communities remain insufficiently protected. Legal certainty, an essential pillar of the rule of law, cannot be realised as long as underground space continues to be governed by abstract doctrines and incomplete regulations. Therefore, a coherent legal framework defining subsurface rights, establishing vertical depth limits, enabling a 3D registration mechanism, harmonising institutional authority, and integrating underground governance into national spatial planning is urgently required to ensure that underground development proceeds in an orderly, equitable, and sustainable manner (Qiao, 2022; Tan & Zhao, 2020).

Comparative and Theoretical Perspectives on Subsurface Ownership Regulation

The development of underground space utilisation has fundamentally transformed the traditional conception of land ownership from a two-dimensional to a three-dimensional legal paradigm. Historically, classical property law adhered to the maxim *cuius est solum, eius est usque ad coelum et ad inferos*, which implied that ownership of land extended indefinitely upward to the sky and downward to the centre of the earth. While this doctrine reflected the relatively simple pattern of land use in earlier periods, rapid urbanisation and technological advancement have rendered it increasingly inadequate to accommodate the complex vertical utilisation of land. The expansion of underground transportation systems, utility networks, commercial facilities, and strategic public infrastructure demonstrates that unlimited vertical ownership is no longer compatible with contemporary spatial development. Consequently, numerous jurisdictions have gradually replaced the traditional doctrine with statutory frameworks that define vertical boundaries and establish independent legal regimes governing subsurface space. Japan, Singapore, and South Korea represent prominent examples of countries that have adopted specific legal frameworks regulating underground space in response to land scarcity and increasing urban development demands.

From a theoretical perspective, the emergence of three-dimensional property theory constitutes one of the most significant developments in modern land law. Unlike the conventional approach, which treats land as a horizontal parcel, three-dimensional property theory conceptualises land as a volumetric legal object whose ownership, control, and utilisation may be divided according to measurable spatial dimensions. This approach recognises that proprietary rights need not remain inseparable from a single surface parcel but may instead be allocated independently across different vertical layers. Such a framework seeks to balance the protection of private property rights with the state's responsibility to manage spatial resources efficiently for sustainable development. The practical application of this theory can be observed in Japan through the Act on Special Measures concerning Public Use of Deep Underground (2001), which authorises the government to utilise deep underground space for public infrastructure projects without obtaining consent from every surface landowner, provided that the development serves the public interest and satisfies statutory requirements. This legislation illustrates how three-dimensional property theory has been translated into positive law by establishing clear legal boundaries governing subsurface ownership.

The theoretical foundation of three-dimensional property is closely associated with the principle of legal certainty, which constitutes one of the fundamental objectives of modern land administration systems. Legal certainty cannot be achieved unless the object of property rights is clearly defined. In the context of underground space, ambiguity regarding the vertical extent of land ownership creates uncertainty for landowners, governments, investors, and infrastructure developers alike. Consequently, legal scholars argue that ownership boundaries should no longer be determined solely through horizontal cadastral mapping but should also incorporate volumetric dimensions capable of distinguishing multiple legal interests existing within the same geographical location. Singapore has implemented this approach through the State Lands Act, the Land Titles Act, and related land administration regulations, which enable underground space to be legally separated from surface ownership and registered independently through a three-dimensional cadastral

system. By providing precise spatial boundaries, the Singaporean legal framework facilitates the coexistence of multiple proprietary interests while minimising legal conflicts arising from overlapping land use.

Another theoretical perspective that has significantly influenced subsurface regulation is the principle of horizontal separation (*horizontale scheiding*). Unlike the doctrine of accession, which considers everything attached to or beneath the land as an inseparable component of surface ownership, the principle of horizontal separation recognises that different legal objects may possess distinct ownership status despite occupying the same parcel of land. Originally developed within continental European legal systems, this principle has subsequently been adapted by several Asian jurisdictions to accommodate increasingly complex urban development. South Korea provides a notable example through its Civil Act and various statutes governing underground development, which permit public infrastructure and commercial facilities to exist beneath privately owned land without extinguishing or diminishing the legal rights of surface owners. The Korean experience demonstrates that vertical separation of proprietary rights has evolved beyond a purely theoretical construct into an effective legal mechanism capable of supporting sustainable urban development while preserving legal certainty for all parties concerned.

The theoretical evolution toward vertically differentiated property rights has also been reinforced by the concept of public domain management. Contemporary land law scholars increasingly argue that deep underground space possesses strategic characteristics that distinguish it from ordinary private property. In Japan, deep underground areas that no longer maintain a functional relationship with surface land use may be utilised for public infrastructure projects without substantially interfering with private ownership rights. Singapore has adopted a comparable approach by granting the government broader authority to allocate underground space for the construction of mass rapid transit systems, utility corridors, and other public infrastructure essential to national development. These legal developments reflect a significant paradigm shift from the traditional notion of absolute private ownership toward a more balanced model that reconciles individual proprietary rights with the broader public interest. From the perspective of modern land law theory, this approach embodies the social function of land rights by ensuring that underground space can be managed efficiently, equitably, and sustainably without undermining the legitimate interests of private landowners (Adnan, 2026).

Country	Legal Framework	Vertical Boundary	Independent Subsurface Rights	3D Registration	Public Interest Utilisation
Indonesia	Basic Agrarian Law (Law No. 5/1960); Government Regulation No. 18/2021	Not explicitly regulated	Not specifically recognized	Not available	Limited legal basis
Japan	Act on Special Measures concerning Public Use of Deep Underground (2001)	Explicit statutory depth	Recognized	Available	Strongly regulated
Singapore	State Lands Act; Land Titles Act	Explicit vertical demarcation	Recognized	Fully implemented	Extensive governmental authority
South Korea	Civil Act; Underground Safety Management Act	Regulated through statutory framework	Recognized	Implemented	Integrated with urban development

Table 1: Comparative Regulation of Subsurface Ownership in Selected Jurisdictions
Authors' compilation [source]

Reconstruction for a New Regulatory Framework Governing Subsurface Ownership and Vertical Land Demarcation

The increasing complexity of urban development in Indonesia has revealed substantial weaknesses in the existing legal framework governing subsurface ownership and vertical land demarcation. Although the Basic Agrarian Law of 1960 (UUPA) conceptually recognises that land rights extend upward and downward “as far as necessary for the use of the

land,” this formulation is inadequate for regulating contemporary three-dimensional land use. Its functional character fails to establish measurable vertical boundaries and does not define subsurface parcels as independent legal objects. Consequently, Indonesia’s land law system continues to operate within a predominantly two-dimensional paradigm that is incompatible with the realities of layered infrastructure, underground utilities, subway systems, deep basements, and multi-level engineering works (Harsono, 2008; Qiao, 2022).

Government Regulation No. 18 of 2021 (PP 18/2021) represents an important normative development by formally introducing Ruang Atas Tanah (RAT) and Ruang Bawah Tanah (RBT) as potential objects of land rights. Nevertheless, the regulation remains largely conceptual and lacks detailed mechanisms for implementation. It does not regulate depth limits, technical surveying methods, volumetric mapping standards, or procedures for registering underground parcels within the national land registry administered by ATR/BPN. The absence of these implementing norms prevents subsurface parcels from being registered, transferred, mortgaged, or legally protected in the same manner as surface land, thereby generating legal uncertainty for developers, government authorities, communities, and investors. Without measurable vertical demarcation, the risk of overlapping claims between surface owners and subsurface users remains significant (Hermawan & Hananto, 2021; Abdullah & Purbawa, 2020).

Accordingly, the need for a new regulatory framework governing subsurface ownership is both urgent and multifaceted. First, clear vertical property boundaries must be established. A modern regulatory regime should define the upward and downward extent of land ownership using measurable criteria, such as depth ranges, rather than relying on abstract functional necessity. This approach aligns with comparative legal models. In Japan and Singapore, for instance, subsurface space beyond certain depths is categorised as part of the public domain, allowing the construction of deep tunnels and underground utilities without generating conflicts with surface landowners (Ariga & Zheng, 2017; Tan & Zhao, 2020). Indonesia’s failure to adopt similar statutory clarity undermines legal certainty and complicates land acquisition for underground infrastructure.

Second, Indonesia must develop a three-dimensional (3D) cadastre capable of recording volumetric parcels. A 3D cadastre is essential for registering subsurface property rights with precise spatial coordinates and legal boundaries. Without such a system, volumetric parcels cannot be mapped, certified, or reliably distinguished from surface ownership, leaving no authoritative record to prevent disputes or duplication of rights. The current land administration system is ill-equipped to accommodate stacked ownership or separate subsurface rights, which poses serious obstacles for public infrastructure projects, private development, and local governments implementing spatial planning policies (Abdullah & Purbawa, 2020; Tan & Zhao, 2020).

Third, a new regulatory framework must establish a distinct legal instrument governing subsurface rights. Indonesia could introduce a specific Right to Subsurface Space (Hak Ruang Bawah Tanah), analogous to existing limited real rights such as Hak Guna Bangunan or Hak Pakai, but tailored to underground utilisation. This right should clearly define duration, depth, spatial dimensions, permitted uses, legal obligations, and the relationship between surface and subsurface right holders. The recognition of a distinct subsurface right would also allow underground parcels to function as transferable and mortgageable assets, thereby enhancing investment feasibility for infrastructure and commercial projects (Qiao, 2022; Hermawan & Hananto, 2021).

Fourth, institutional harmonisation is imperative. Currently, multiple ministries and agencies, including ATR/BPN, the Ministry of Public Works and Housing (PUPR), the Ministry of Energy and Mineral Resources (ESDM), the Ministry of Environment and Forestry (KLHK), and local governments, exercise overlapping authority over different aspects of subsurface governance. A comprehensive legal framework must clearly delineate institutional competencies, specifying which authority regulates subsurface parcels, issues titles, supervises safety and environmental impacts, and coordinates inter-agency governance. Fragmented authority has thus far resulted in regulatory inconsistency, delayed permitting, conflicting administrative decisions, and inefficient project implementation (Sumardjono, 2015; Hermawan & Hananto, 2021).

Fifth, environmental and social safeguards must be embedded within the new regulatory framework. Unregulated subsurface construction may lead to groundwater contamination, land subsidence, ecological disruption, and public safety risks. Future legislation must therefore incorporate clear requirements for environmental impact assessments, geological surveys, depth limitations, and continuous environmental monitoring. Equally important is the protection of customary and indigenous communities, whose land tenure systems often encompass subsurface elements imbued with cultural and spiritual significance. Without explicit legal safeguards, these communities face heightened risks of dispossession and marginalisation as underground space is increasingly exploited for development (Elvinda, 2021; Sugiarto & Winarso, 2019).

Sixth, the new framework must provide transparent and effective mechanisms for dispute resolution. Vertical land disputes differ fundamentally from traditional horizontal land conflicts, as they involve volumetric overlaps, underground trespass, liability for subterranean damage, and conflicts between public infrastructure and private ownership. Clear rules governing compensation, expropriation, underground servitudes, and easements are therefore necessary to ensure fairness, reduce litigation, and maintain public trust in land governance institutions (Wicaksono, 2020; Qiao, 2022).

In sum, Indonesia urgently requires a comprehensive regulatory framework governing subsurface ownership and vertical land demarcation. Such a framework must establish measurable vertical limits, introduce a functional 3D cadastre, recognise a distinct subsurface right, harmonise institutional authority, integrate environmental and social safeguards, and provide effective dispute-resolution mechanisms. Without these reforms, underground development in Indonesia will continue to operate under legal uncertainty, constraining national infrastructure development, discouraging private investment, compromising environmental sustainability, and weakening the protection of community rights. A modernised subsurface property regime is therefore not merely a legal refinement but an essential foundation for equitable, efficient, and sustainable spatial governance (Tan & Zhao, 2020; Qiao, 2022).

CONCLUSION

This study demonstrates that Indonesia's existing agrarian law framework remains inadequate to regulate subsurface ownership and vertical depth boundaries in response to the growing use of underground space. Although the Basic Agrarian Law and Government Regulation No. 18 of 2021 acknowledge that land rights may extend above and below the surface, they do not provide clear standards on the legal extent of such rights, measurable depth limits, registration procedures, or the juridical status of subsurface parcels. This creates a normative vacuum that weakens legal certainty, complicates land administration, increases the risk of overlapping claims, and limits the effective use of underground space for infrastructure, utilities, and urban development.

The findings further show that the absence of clear subsurface regulation has broader legal, institutional, environmental, and social consequences. Without explicit vertical demarcation, landowners, developers, and state authorities may assert competing claims over the same underground space. The lack of a three-dimensional cadastre prevents underground parcels from being properly mapped, registered, transferred, or used as collateral. At the same time, fragmented institutional authority, insufficient environmental safeguards, and limited protection for customary communities create further challenges for sustainable and equitable subsurface governance.

Comparative experiences from Japan, Singapore, and South Korea show that effective underground space governance requires clear statutory depth limits, recognition of independent subsurface rights, and a land administration system capable of recording three-dimensional property interests. These models indicate that Indonesia should move beyond a surface-based conception of land rights and develop a vertically integrated regulatory framework that balances private ownership, public interest, investment certainty, environmental protection, and community rights.

Accordingly, this article recommends the development of a comprehensive legal regime governing subsurface ownership and vertical land demarcation. Such reform should include the establishment of measurable vertical boundaries, the introduction of a dedicated Right to Subsurface Space, the implementation of a standardised three-dimensional cadastre, clearer institutional coordination, environmental and social safeguards, and effective dispute-resolution mechanisms. These reforms are essential to ensure that Indonesia's future underground development proceeds with legal certainty, administrative coherence, social justice, and environmental sustainability.

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Startup Experience Trip in Strengthening Social Capital and Empowering the Economy of Partner Village

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ABSTRACT

This study investigates the role of the startup Experience Trip in enhancing social capital and empowering partner village communities in Klaten Regency. Employing a qualitative case study methodology, the research analyses Experience Trip's function as a bridge among stakeholders involved in the development of community-based tourism (CBT). The findings indicate that Experience Trip not only provides alternative tourism packages including empowering, live-in, and travel options but also serves as a facilitator of community empowerment through training and mentorship programs for village communities. Utilising Robert D. Putnam's social capital framework, encompassing networks, norms, and trust, this study reveals that Experience Trip has effectively cultivated bridging social capital among different groups, fostered experience-oriented tourism, and established trust through a community involvement approach that tends to be top-down, facing challenges related to lower community participation. The implications of this study underscore the importance of inclusive collaboration and the integration of sustainability principles into tourism startup business models to reinforce long-term socio-economic benefits.

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INTRODUCTION

Indonesia is a tropical country, and tropical nations possess inherent advantages that can be effectively harnessed for tourism development. (Soma et al., 2022). The country is endowed with diverse resources that can serve as attractions for tourists. Tourism significantly influences economic growth within the nation. (Buchori et al., 2023). Cultural diversity, natural landscapes, and historical heritage sites serve as potential destinations for both international and domestic visitors. (Fahrurrozi et al., 2024). The establishment of tourism objects within a region can confer social and economic benefits to the local community. Nonetheless, the management of tourism must be conducted by competent stakeholders to ensure the equitable benefit of the community. (Usman et al., 2024). Therefore, comprehensive resource assessment is imperative prior to the development of tourism sites. (Wardiyanta, 2006).

The 1998 reform marked a significant milestone in Indonesia's historical development. The delegation of authority has become a vital component of the nation's strategic progress. This decentralisation, formalised through regional autonomy, has empowered regions to utilise their unique potentials, particularly through tourism initiatives. In accordance with Indonesian Law Number 25 of 2004 concerning the National Development Planning System, efforts to promote community economic activities are required to prioritise the enhancement of tourism capacities. Moreover, policies focused on the preservation, development, and appreciation of local wisdom, an essential aspect of regional identity, are fundamental to the advancement of regional tourism.

The social tourism business model constitutes one of the emerging frameworks within rural tourism employed in developing and less developed nations (Kummitha et al., 2023). Social entrepreneurship distinguishes itself from

traditional entrepreneurship by prioritising positive social impacts over solely financial gains (Amruddin et al., 2024). In contemporary tourism enterprises, the scope extends beyond economic development to include environmental conservation. The sector is advancing towards a phase characterised by increased sustainability, attributable to environmental degradation associated with tourism activities, namely resource exploitation, waste generation, and the greenhouse effect (Neupane et al., 2025). Consequently, tourism organisations are compelled to reevaluate, reflect, and redefine the entire industry through innovative processes and services tailored to customer needs (Aquino & Boluk, 2025).

Within the domain of tourism, social capital assumes a crucial role in the development of tourist destinations. Social capital is defined as the relationships among three fundamental elements: networks, norms, and trust, which are cultivated within a community. (Putnam, 2011). The importance of social capital in the tourism sector is supported by numerous scholarly investigations. Research conducted by (Abdillah et al., 2024) indicates that social capital is essential for the growth of the Labuan Bajo tourism region as a premier destination, with the goal of enhancing services and destination features to deliver high-quality experiences to visitors. Additionally, research by (Usman et al., 2024) demonstrates that social capital facilitates collaboration among stakeholders involved in tourism development, including local entrepreneurs who contribute to product diversification.

In Indonesia, a significant phenomenon has been observed among startups operating within the tourism sector, exemplified by Experience Trip. This startup not only offers tour packages but also acts as a catalyst for empowerment and facilitates the development of tourist destinations. Prior research on community-based tourism has predominantly focused on established villages, thereby neglecting the examination of startup actors who serve as primary drivers of change in village-based tourism. The success of Experience Trip is influenced by both the attractiveness of the destinations and the social capital inherent among stakeholders. This study explores the implementation of the empowerment model by startups, investigates the nature of relationships between startups and other stakeholders, and examines how the capacities of partner villages and tour participants are enhanced, utilising Robert D. Putnam's social capital theory. Employing Putnam's conceptualisation of social capital as an analytical framework, this research aims to understand the roles of networks, norms, and trust as mechanisms supporting community empowerment and capacity building within partner villages. The study positions startups as initiators in establishing a tourism ecosystem. Additionally, this social capital analysis is contextualised within the development of community-based tourism (CBT).

The positioning of this study can be clarified against three closely related strands of prior research. First, studies on social entrepreneurship and rural tourism in China, such as Wang et al. (2024), examine how social enterprises build legitimacy and social capital to advance sustainable development goals in a single village, but treat the enterprise as an internally embedded community actor rather than an external startup entering a network of partner villages. Second, Indonesian studies on rural tourism entrepreneurship, such as Utami et al. (2023), identify success factors: income management, collaboration, innovation, and resource management across award-winning tourism villages, but do not examine the specific mechanism by which networks, norms, and trust are built between an outside startup and multiple partner communities. Third, studies on tourism-based social entrepreneurship organisations, including Dahles et al. (2020) in Cambodia and Peredo and Wurzelmann (2015) in the Bolivian Amazon, typologize community engagement models but are not framed through Putnam's social capital dimensions applied specifically to a startup village relationship. This study departs from these strands by positioning a single tourism startup, Experience Trip, as an external initiator that simultaneously operates across several partner villages, and by using Putnam's networks-norms-trust framework as an integrated analytical lens rather than a background reference. This combination of a startup-as-initiator perspective, a multi-village case, and an explicit Putnam-based analysis of both the achievements and the limitations (namely the top-down tendency and the empowerment paradox) of the resulting social capital constitutes the novelty of this research relative to prior work on community-based tourism and social entrepreneurship.

METHODS

This study employs a qualitative methodology with a case study approach. Qualitative research was selected to comprehend the phenomena experienced by the research subjects through descriptive sentences derived from data

collection and analysis techniques (Moleong, 2011). The case study conducted was an intrinsic case study, focusing on a particular case within a specific context (Denzin & Lincoln, 2009). The qualitative methodology utilised in this research aims to examine the social capital of the Experience Trip startup in conjunction with other stakeholders involved in tourism development and community capacity building in Klaten Regency. Klaten Regency was purposively selected as the research location because it is the operational headquarters of Experience Trip and the site where the startup's empowerment model with partner villages, including Balerante, Delanggu, and Jatinom, has been implemented the longest, making it the most information-rich setting for observing the startup village relationship over time. The informants comprised a total of 12 individuals, consisting of 2 founder(s)/management staff of the Experience Trip startup, 3 village government officials, 4 representatives of village business groups (including the tourism awareness group/Pokdarwis), and 3 members of the local community who have participated in Experience Trip's programs. These informants were selected through purposive sampling, a technique employed to determine research subjects and objects aligned with the research objectives (Satori & Komariah, 2012).

The research data encompasses both primary and secondary sources. Primary data pertains to information obtained directly, as delineated by (Darmawan, 2013), through methods such as in-depth interviews. Secondary data refers to information acquired indirectly from other individuals and documents, in accordance with (Sugiyono, 2013). In this study, secondary data were collected from Experience Trip's social media platforms and documentation of its activities. The data analysis techniques employed included data collection, data reduction, data presentation, conclusion drawing, and data verification, following the methodology outlined by (Miles & Huberman, 1994). Data collection involved gathering information from Experience Trip's social media and conducting interviews with key informants. Data reduction entailed processing and refining the data to align with the research focus, verified as consistent with the research findings. The researcher subsequently analysed and compiled the curated data into a comprehensive report. Data validity was established through source and technique triangulation: findings from interviews with the Experience Trip founders were cross-checked against interviews with village government officials and community members (source triangulation), and interview data were further compared with secondary data from Experience Trip's social media documentation and field observation notes (technique triangulation). Verification was conducted to ensure the accuracy and validity of the research data, ultimately leading to the formulation of conclusions.

RESULTS AND DISCUSSION

Results

Startup Experience Trip

Indonesia, a nation profoundly interconnected with advancements in technology and information across various sectors, has witnessed the emergence of new enterprises operating under the framework of start-up companies. These startups are characterised as new businesses that utilise information technology in their product offerings. (Zulkifli, 2023). Among these emerging entities is Experience Trip, a start-up engaged in the tourism industry. Headquartered in Klaten, Experience Trip collaborates with several partner villages, including Balerante Village, Kota Gede, Delanggu Village, Gari Village, Kahuman Village, Krikilan Village, and Tibayan Village. Over time, the company has maintained a focus on Balerante while continuing to serve its other partner villages. Its services encompass a diverse range of tourism options, such as nature tourism, cultural festivals, and historical tourism. Initially, Experience Trip operated as a tourism intermediary, organising open trips, recreational field trips, children's excursions, couples' trips, and walking tours. The organisation has evolved from merely functioning as an organiser to also serving as a catalyst for youth empowerment within the villages by involving and strengthening the communities of its partner villages. The organisation is founded upon three core pillars: empowerment, residence, and tourism. Furthermore, Experience Trip actively employs social media platforms such as YouTube, Instagram, and TikTok for promotional activities. Its Instagram profile is accessible at <https://www.instagram.com/experiencetrip.id>, and its YouTube channel at <https://youtube.com/@extripid>.

Tourism Options

Tourism, as delineated in Law No. 10/2009, is characterised as activities supported by facilities and services provided by the community, entrepreneurs, the government, and local authorities (Rohmad & Probohudono, 2015). Experience Trip offers three distinct packages for engagement in tourism activities, namely empowering, live in, and travel. These

packages encompass three diverse activities. The empowering package involves initiatives that commence from the ground up, eventually establishing a tourist destination. The live-in program is akin to a community service initiative (KKN), involving participation in tourism activities while residing in a partner village affiliated with Experience Trip for several days. The travel package constitutes the final offering, involving participation in activities comparable to general tourism while visiting a partner village of Experience Trip.

The activities conducted by Experience Trip correspond with research findings indicating that the three examined locations substantially enhance the attractiveness of tourist destinations. Product innovation facilitates the delivery of unique and authentic experiences for visitors, thereby increasing satisfaction and fostering loyalty. In contrast to traditional tourism, these activities promote greater engagement by inviting participants to partake in routine community activities. Participants will engage in actions that foster meaningful and participatory experiences, thereby reducing the gap between local communities and tourists. Through these initiatives, practices of mutual respect between tourists and residents are likely to develop.

Experience Trip collaborates with partner villages in Delanggu, including the Rojo Lele studio, which hosts the Mbok Sri festival annually as an expression of gratitude from farmers for their harvest. Each participant is personally encouraged to contribute to each festival activity. Similarly, in Jatinom, through collaboration with a cultural community, participants are invited to engage in gamelan training. These activities undoubtedly offer tourists memorable experiences from every event they partake in.

Empowerment Model

Experience Trip, a startup operating within the tourism sector, is not solely focused on generating profit but also undertakes empowerment initiatives. The empowerment efforts conducted by Experience Trip concentrate on partner village communities and tourism participants. Consequently, tourism becomes an activity that directly engages and involves the community, thereby providing benefits for the local population. (Rohmad & Probohudono, 2015). The empowerment initiatives executed by Experience Trip function as a mechanism to enhance the capacity of partner village communities involved in village tourism programs within their respective regions.

When engaging in empowerment programs, communities are systematically provided with training tailored to the specific capabilities of the village community. Initiatives aimed at empowerment, such as tourism documentation, leverage the resources of partner village communities, collaborate with tourism organisations, and coordinate with camping groups to supply tents. These empowerment initiatives are also subject to evaluation to identify any deficiencies within the development of the programs. Experience trips in empowerment are distinguished from other initiatives because they additionally empower the participants involved in tourism. According to research by (Falk, 2016), visitor experiences are cultivated through collaboration between visitors and the tourism environment. Empowering tourism participants will consequently influence the development of experiential tourism.

Empowering tour participants also involves enhancing community capacity through programs provided by Experience Trip within tour packages. The concept presented by Experience Trip aims to connect tourists more closely with the lives of villagers, fostering an emotional bond between guests and residents. In addition to establishing emotional connections, this approach is designed to improve the overall visitor experience. Such initiatives are anticipated to significantly increase ecological and social consciousness. Experiential tourism emphasises the active participation of tourists in local activities that generate shared value, ranging from raising social and environmental awareness to bolstering the sustainability of community-based tourism. (Richards, 2018). Tourists are not merely visitors seeking services but are also engaged in sharing, learning, and contributing directly through conservation efforts, cultural preservation, and local economic development.

Community-based tourism, commonly known as CBT, advocates for the advancement of tourism development through the empowerment of indigenous communities (Hidayanti & Fitrianto, 2022). Experience Trip enhances partner villages by positioning the community as the primary agent rather than merely a recipient. This transformation yields a positive impact, as the community can actively participate in tourism activities. Community involvement in tourism is of

paramount importance because such activities occur within the local community's territory. Through participation, the community assumes a vital role in fostering tourism development within their own village. Community-based tourism is anticipated to generate a multiplier effect; however, this effect is contingent upon the proper implementation of empowerment initiatives. The resulting multiplier effects include the creation of employment opportunities for the village residents, a reduction in unemployment rates, and supplementary income for the local community.

The projected open unemployment rate (TPT) in Klaten Regency for the year 2025 is 3.88% (BPS Kabupaten Klaten, n.d.). Unemployment primarily originates from inadequate human resources. (Fadillah & Arbarini, 2022). Social issues have increasingly become a significant factor in engaging youth in productive endeavours, notably through the development and management of local tourism initiatives. (He et al., 2022). Youth constitute a vital asset for development efforts at the village level. However, some villages lack a comprehensive understanding of the potential inherent within their young populations. The involvement of young people at the village level plays a strategic role in fostering social, economic, and cultural transformations. (Nadila, 2023).

Enhancing the capacity of the community, particularly among local youth, constitutes one of the primary objectives of the Experience Trip initiative in partner villages. In this context, Experience Trip functions as a facilitator. It designs tourism villages grounded in conservation principles and youth collaboration. Local youth serve as the principal agents in the empowerment activities conducted by Experience Trip. As a facilitator, Experience Trip provides training to young individuals. Youth empowerment is crucial, as young people are not only fulfilling their personal development but also preparing to confront future challenges. Through capacity building, young people will play a vital role in the advancement of local tourism and, ultimately, in the sustainable enhancement of the community's economy and general welfare.

Capacity building through empowerment was also conducted via an Experience Trip to one of the partner villages situated within a disaster-prone zone, specifically Balerante Village. This Experience Trip transformed Balerante Village into a community-based disaster mitigation living laboratory. The capacity development of the Balerante Village community is undertaken as a measure to mitigate disasters. Law No. 24 of 2007 stipulates that disaster mitigation must be executed appropriately to decrease associated risks or threats, involving both physical and social enhancements, to augment community understanding and awareness in confronting natural disasters. (Wirawati et al., 2025). The activity conducted through the Experience Trip was emergency response training in Balerante Village, aimed at enhancing the community's capacity by imparting fundamental knowledge and skills related to disaster management.

The empowerment facilitated by Experience Trip can be characterised as a top-down model. The top-down approach is one that employs authority at the highest level without engaging the community. This approach often involves elements of self-interest. (Sfitri & Syahara, 2021). Strategies of empowerment employing the top-down model frequently face failures attributable to low community participation. Similarly, Experience Trip experienced comparable challenges related to the top-down empowerment model, specifically limited engagement from the partner village community. Nevertheless, in the case of Experience Trip, the low participation was primarily due to the absence of guidance from the Village Government to help the local community understand the tourism potential of their village.

The empowerment activities consist of training sessions for the community. The training materials are provided by Experience Trip to the community, such as how to serve tourists. However, Experience Trip does not limit itself to what is needed by the community, so that it knows what the community needs. Experience Trip, in collaboration with the Village Government, conducts evaluations of the programs that have been implemented. These evaluations are conducted monthly and are interspersed with new materials from Experience Trip to support the capacity of the community. The collaboration between Experience Trip and the Village Government that has been established will foster trust. This trust is important for stakeholders to ensure that empowerment remains sustainable.

Challenges and Development

Within the realm of tourism development, numerous challenges have been identified, each presenting distinct difficulties. Experience Trip is likewise subject to these issues, as it encounters obstacles in its endeavours to promote

tourism. A primary concern concerns limited accessibility; in certain partner villages near tourist attractions, transportation and supporting infrastructure remain inadequate. Such infrastructural deficiencies are likely to negatively impact tourist visitation (Rohmad & Probohudono, 2015). It is imperative for the government to prioritise support for facilities within regional tourism, as this initiative possesses the potential to significantly strengthen the regional economy.

The absence of these facilities may adversely affect tourists' interest in visiting attractions. (Kiriman et al., 2023). Infrastructure constitutes a fundamental component in the development of tourism destinations. (Khadaroo & Seetanah, 2007). A well-established infrastructure is expected to generate employment opportunities, stimulate economic activities, and provide numerous additional benefits. According to the study by (Kanwal et al., 2020), a positive correlation exists between road and transportation infrastructure and community support for tourism. Enhancing road infrastructure will improve mobility and consequently increase the influx of tourists to various destinations, thereby fostering economic growth.

The deficiency of human resources presents a significant challenge, particularly within the tourism sector. Communities limited by scarce human resources may also encounter adverse effects on the sustainability of tourism endeavours. In the context of tourism, human resources are defined as the inherent potential within individuals to serve as adaptable and transformative social actors, capable of self-regulation and utilising natural resources to attain prosperity in a manner that is both balanced and sustainable. (Rohmad & Probohudono, 2015). It is imperative for local communities to actively participate in capacity building initiatives at all stages of the tourism industry, including planning, implementation, and evaluation.

Enhancing the capacity of local human resources undoubtedly plays a crucial role in ensuring the sustainability of tourism. One aspect of improving human resource capacity pertains to ecological understanding. According to research by (Lee & Jan, 2019), it appears that the community exhibits a lack of concern for environmental conservation. Environmental conservation is essential not only for the sustainability of tourism but also for the community's survival. Consequently, it is imperative for the community to enhance its human resource capabilities to recognise the significance of environmental conservation. The understanding of conservation within the local community must be complemented by awareness among local institutions, specifically the village government. Research by (Stronza & Gordillo, 2008) indicates that strong local institutions enable the community to better adapt to change. These findings suggest that the village government and the local community cannot operate independently in capacity building; rather, they must collaborate towards a shared objective.

Through empowerment with a network of stakeholders from Experience Trip and the village government, the community can collaborate with external parties such as NGOs for conservation. One initiative that can be undertaken is to raise funds for environmental education programs to enhance public awareness of environmental issues. (Peredo & Wurzelmann, 2015). A positive environmental setting will also foster increased environmental consciousness and encourage eco-friendly behaviours within tourist destinations. (Sakata & Prideaux, 2013). Experience Trips aim to augment the community's ecological capacity and concurrently improve education regarding waste management. Additionally, the village conducts regular clean-up activities as part of a new cultural practice.

Tourism, as articulated by (Rohmad & Probohudono, 2015), possesses the capacity to induce transformative changes across various domains. Experience trips, which also empower partner village communities, have yielded contrary outcomes, exemplified by diminished community participation. Residents involved in tourism startups are regarded as principal stakeholders, given their necessity throughout the entire tourism development process. (Dahles et al., 2020). The engagement of local communities in tourism startups is pivotal to the success of tourism development, as they interact directly as the subjects of tourism, thereby leaving an impression on tourists that fosters repeat visitation. (Bhave, 1994). It is essential for residents to be actively involved at every stage of tourism development, from planning to evaluation. Furthermore, participation should not be limited to selected communities; all local communities possess the right to access capacity-building initiatives and engage in tourism activities.

Throughout the empowerment process, spanning from the planning phase to the evaluation phase, the community shall accumulate valuable experience. This experiential knowledge shall be disseminated orally, based upon the residents' own encounters. Consistent with the findings of the study (Dahles et al., 2020) it is evident that community participation is significantly influenced by residents' perceptions. With active engagement from the local community, it is anticipated that residents will recognise the potential inherent within their village. Furthermore, it is expected that such involvement will foster a sense of ownership among community members. This sense of ownership is likely to positively influence their participation in empowerment initiatives and capacity-building efforts within the community.

Less attractive tourist destinations also pose a significant obstacle. Nonetheless, tourism promotion can be utilised to attract visitors. Enhancing efforts in tourism promotion will undoubtedly increase tourists' interest in exploring various destinations. Tourism promotion plays an essential role in the development of tourism. (Rohmad & Probohudo, 2015). The integration of digital technology into marketing strategies serves as a key driver for expanding the influence of businesses, thereby enhancing operational efficiency and market access for small and medium-sized enterprises. The Krealogi program exemplifies how digitalisation empowers creative SMEs in Indonesia, with participants receiving technology-based training through this platform, including marketing via social media, cloud-based inventory management systems, and e-commerce. (Amruddin et al., 2024). The implementation of technological solutions will improve operational efficiency and facilitate broader market reach. Additionally, Experience Trip leverages various platforms such as Instagram, TikTok, and YouTube to promote its tourism services.

Community empowerment through the Experience Trip has encountered a paradoxical challenge. This challenge, stemming from the empowerment process, manifests as an empowerment paradox. The initial stage of this paradox can be observed in the Experience Trip initiative, which provides valuable learning opportunities while preserving strategic oversight. The empowerment paradox describes a scenario wherein interventions aimed at enhancing community capacity inadvertently render the community reliant on external entities. Naturally, this presents a challenge for the community. As evidenced in the research findings by (Dahles et al., 2020), certain community-based organisations serve as facilitators for village development but remain dependent on foreign donations. To mitigate the empowerment paradox, the Village Government may serve as a counterbalance to the influence of the Experience Trip, thereby ensuring that the relationship is not entirely under the control of the startup.

Inter-Stakeholder Relations

Numerous villages across Indonesia lag behind in development and community welfare, partly owing to inadequate coordination among stakeholders. (Kumala et al., 2024). Experience Trip collaborates with stakeholders at various levels to implement its programs and benefits from a robust local foundation. By leveraging local potential and wisdom, this program involves the village government, local youth as field activists, tourists and volunteers as external partners, community networks, and social media as tools for program promotion. Multilevel collaboration fosters an inclusive and adaptive system that engages diverse parties. Comprehensive and sustainable development is essential for maintaining relevance and competitiveness in an increasingly complex tourism market. (Setiawan et al., 2024).

According to (Soekanto & Sulistyowati, 2013), relationships can be classified into two categories: associative (positive) and dissociative (negative). Associative relationships, characterised as positive, are formed based on the strengthening of solidarity. Research on stakeholder relationships has demonstrated the presence of associative interactions among stakeholders. The Experience Trip, the Village Government, local communities, volunteers, and community networks promote continuity through their engagement activities. Tourism stakeholders actively communicate and coordinate efforts to develop the village's potential. Each stakeholder functions in accordance with their respective duties and responsibilities. Direct communication among stakeholders facilitates ongoing dialogue, thus maintaining continuous interaction and solidarity. By maintaining a high level of engagement among stakeholders, the Experience Trip initiative seeks to integrate the concept of sustainable tourism into village regulations. This initiative is anticipated to contribute to the enhancement of the local community's economy through the development of business units owned by local residents.

Discussion

The Startup Experience Trip exceeds the boundaries of a mere tourism initiative; it serves as a catalyst for transformative change by promoting the development of new social relationships among startups, rural communities, local institutions, and tourism participants. Putnam, who regards social capital as being constructed through repeated social practices, agrees with the goal of the Startup Experience Trip to foster stakeholder relationships. The Experience Trip functions as a mediating platform that consolidates economic, social, and cultural interests within the community-based tourism ecosystem. Furthermore, the trip acts as a conduit for establishing a cross-group network through collaboration with stakeholders such as Pokdarwis (tourism awareness group), camping communities, local documentation and photographers, local communities, and village administrations. This network connects two previously unconnected entities that previously lacked direct engagement with each other within the same domain. Their convergence at a common point facilitates intensive communication among stakeholders, especially when driven by shared objectives. The findings by (Kummitha et al., 2023) suggest that community participation in social entrepreneurship-oriented tourism is influenced by the strength of cross-actor networks. Maintaining this level of communication enhances stakeholder solidarity and promotes sustainable engagement based on shared values and objectives.

The network built among stakeholders, ranging from the Experience Trip startup, tourism groups, camping communities, local documentation/photographers, local communities, and village governments, has enabled local communities in partner villages to transform from being mere objects of tourism to becoming subjects of tourism. Collaboration among these actors is particularly important in terms of social capital. The results of the research from (Usman et al., 2024) show that social capital plays an important role in accelerating collaboration between tourism stakeholders in developing regions. Collaboration between actors based on relationships and networks has resulted in the strengthening of local communities. The strengthening of local communities that have transformed into subjects of tourism in partner villages is reinforced by the transfer of knowledge related to the management of tourism villages. The strengthening of local communities is not only limited to the management of tourism villages for communities engaged in tourism, but in one of the partner villages, the community is also strengthened to face disaster preparedness because it is still within the disaster radius. This transfer of knowledge is facilitated by the Experience Trip startup to local communities engaged in tourism. The village government acts as a medium to bridge the gap between startups and local communities. Promoting the potential of villages through tourism and making local communities the subject creates a collective identity, with villages becoming new tourist destinations and people becoming independent and participating in the development of their villages. The vertical relationship between the Experience Trip startup and stakeholders gives stakeholders in the village access to resources that they did not have before.

Within the established network, certain norms are unquestionably obligatory. Robert D. Putnam's social capital norms serve as guidelines for regulating activities and ensuring the stability of cooperation. Experience Trip develops norms that are not solely centred on consumption. Empowering and live-in programs foster a norm that tourism functions as an educational environment for all stakeholders. The community is no longer regarded as an object but has evolved into an active subject that benefits from capacity-building initiatives. The village community transforms into a partner, extending beyond mere cooperation and service provision. Experience Trip maintains a reciprocal relationship with stakeholders, considering not only immediate profits but also engaging in capacity-building activities aligned with Robert D. Putnam's social capital theory. The relationship between Experience Trip and stakeholders in partner villages is cultivated gradually over an extended period. Norms that become unwritten rules, according to Putnam's social capital, are fragile if not supported by a moral orientation. Experience Trip implements empowerment and capacity-building programs for local communities and promotes the planting of native seedlings within tourism activities, reflecting a commitment to sustainable tourism. It recognises that its operations are not solely profit-driven but also attentive to the environmental and social impacts of tourism, supporting sustainable practices. According to research by (Neupane et al., 2025), tourism startups that incorporate sustainable tourism practices tend to exhibit stronger social resilience in comparison to those focused solely on profit. The strength of such social resilience within tourism startups invariably influences their long-term viability.

Adherence to established norms will foster trust. Trust in Robert D. Putnam's concept of social capital represents a crucial aspect, as the lack of trust hampers the effectiveness of networks and norms. Research conducted by (Abdillah

et al., 2024) indicates that trust is fundamental to the quality of the tourist experience and to tourist loyalty within community-based tourism destinations. The establishment of trust between Experience Trip and stakeholders in partner villages enables the organisation to deliver trips that provide authentic and meaningful experiences, including empowering and live-in programs. Such trust is cultivated through community engagement in managing tourism villages and collaboratively assessing programs, thereby positioning the community as the central focus. With this trust, the community becomes more receptive to hosting tourists, adjusts cooperative patterns, and dedicates their time and effort, thereby assuming an active role. This is particularly significant given that Experience Trip has advantages in tourism services, especially live-in programs. With tourists' confidence, Experience Trip will enhance its reputation as a competent startup in tourism activities within Klaten and the surrounding areas, ensuring its sustainable existence.

Read together, the three findings on networks, norms, and trust suggest a more complex relationship with Putnam's theory than a simple confirmation. Putnam's original formulation treats networks, norms, and trust as mutually reinforcing elements that accumulate through voluntary, horizontal association. The Experience Trip case shows that these elements can also be generated through a vertical, startup-initiated relationship: the startup builds the network by design, the norms are introduced by the startup rather than emerging organically from the community, and trust follows from the startup's consistent delivery of training and evaluation rather than from pre-existing communal ties. This suggests a boundary condition for Putnam's framework when it is applied to externally initiated development interventions: bridging social capital can be manufactured by an outside actor, but its durability appears contingent on whether the Village Government develops sufficient independent capacity to sustain the network, norms, and trust once the startup's direct involvement recedes. The top-down tendency and the empowerment paradox identified in this study are therefore not incidental weaknesses of the Experience Trip model but a structural consequence of building social capital vertically rather than horizontally, which qualifies the applicability of Putnam's community-centred account of social capital formation to startup-led rural tourism development.

CONCLUSION

It can be concluded from the results of this study that the Experience Trip startup has a significant role not only as a tourism business actor, but also as an agent of change in strengthening social capital and empowering partner villages in Klaten Regency. Using a community-based tourism (CBT) approach, Experience Trip has successfully built a multilevel and cross-actor collaborative network (bridging social capital) by involving the village government, local youth, village business groups, communities, and tourists. This network strengthens the social relationships that have been built, opens up access to resources, and encourages the transformation of the community from objects to subjects of tourism.

Utilising Robert D. Putnam's social capital perspective as an analytical framework, Experience Trip has effectively established inclusive networks, norms fostering collaboration, and trust through active participation of local communities in the management of tourist villages and joint program assessment. The empowering, residential, and travel initiatives offer participatory tourism experiences that significantly improve the quality of the tourist experience while concurrently strengthening the social, economic, and ecological capacities of the partner village communities.

Nevertheless, research consistently endeavours to address the challenges associated with empowerment strategies that employ a top-down approach, which indirectly results in limited community engagement. The conditions related to empowerment also give rise to the empowerment paradox, wherein initiatives may inadvertently encourage community dependence on external entities, such as startups. The role of the village government is crucial in balancing power dynamics to ensure that the empowerment process is more inclusive and sustainable.

The Experience Trip demonstrates that tourism startups founded on social engagement possess significant potential to advance village development by augmenting social capital and empowering local communities. The ongoing social and economic advantages can be optimised through improved collaboration among stakeholders, careful selection and implementation of empowerment strategies, and the systematic incorporation of sustainability principles into the operational and regulatory frameworks of tourism villages.

The policy implication is to integrate community-based tourism into village regulations to ensure the sustainability of village tourism programs despite changes in external actors and villages so that they can manage their own tourism autonomously and sustainably. For researchers in subsequent studies, the results of this study can be used as an expansion of the location and comparison of cases in different regions and to strengthen the perspective of linking social capital to see the extent to which policies from institutions strengthen or limit the space for local community participation.

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Analysing Mythological Constructions in Ring Advertisements Using Barthes' Framework

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ABSTRACT

This study examines how Instagram advertisements reconstruct the cultural meaning of rings through mythological signification. Traditionally associated with interpersonal bonds, romantic commitment, and marital status, rings are increasingly being redefined through digital advertising as symbols of broader ideological values. Using Roland Barthes' theory of mythology, this qualitative study analyses two Instagram advertisements: UNICEF India's Promise Ring campaign and the Gabit Smart Ring advertisement. The analysis focuses on verbal text, visual imagery, colour schemes, typography, product presentation, and compositional design to identify how denotative signs are transformed into connotative meanings and ideological myths. The findings show that UNICEF resignifies the ring as a symbol of humanitarian commitment and social responsibility, while Gabit constructs the ring as a symbol of self-care, discipline, and personal optimization. Although the two advertisements promote different values—collective moral duty and individual self-improvement—they both demonstrate how advertising naturalizes culturally constructed meanings through carefully selected semiotic elements. This study contributes to advertising semiotics by extending Barthes' mythological framework to Instagram-based visual marketing and by showing how a familiar material object can be reinterpreted through digital advertising to support competing ideological narratives.

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INTRODUCTION

Rings have existed since ancient Greece, ancient Rome, and ancient Egypt (Zhang, 2021). Archaeological evidence indicates that early rings were crafted from gold, bronze, and silver in various shapes, ranging from archaic to classical designs (Spier, 1992). In ancient Egypt, rings served as symbols of royal authority and success on the throne. By the 13th century, however, their meaning had shifted considerably; rings came to represent a knight's devotion to a noblewoman. Throughout history, rings have carried an extraordinarily diverse range of meanings (Yokoi et al., 2017). In English and Uzbek fairy tales, for instance, rings are not associated with unity or love. Instead, they function as sources of supernatural power; whoever possesses a magic ring is considered invincible, fearless, and destined for success (Djurabayevna, 2021).

In contemporary society, rings are commonly understood as accessories that signify commitment, engagement rings, wedding bands, or friendship rings. Beyond these functions, rings also serve as fashion statements. Many individuals, regardless of gender, collect and wear rings based primarily on aesthetic appeal.

This understanding of rings, however, is not natural or timeless. Rather, it has been shaped by historical forces and commercial interests. In 1926, for example, the jewellery industry launched advertisements promoting men's engagement rings, not because such a tradition existed, but to create one and thereby increase sales (Howard, 2003). This campaign continued into the 1940s, when jewellers promoted the double-ring ceremony for weddings. The trend proved successful and has since become a widely accepted practice.

Nevertheless, the meaning and function of rings continue to vary considerably across geographic, social, religious, and gender contexts. In Australia, an engagement ring is essentially a conditional gift from a man to a woman (Duffy et al., 2020). In China, rings—particularly diamond rings—carry strong romantic connotations. For women, they symbolise desire and love; for men, they signify success and masculinity. This symbolism, however, is largely confined to upper social classes. Among lower-income groups, diamond rings are sometimes perceived as fetishistic objects rather than meaningful symbols (Sun, 2017). The Chinese brand Darry Ring has capitalised on this dynamic by combining emotional appeal with exclusivity, making their diamond rings feel both timeless and scarce (Feng, 2023).

In Malaysia, the position of rings is more flexible. Rings may function as gifts or as sacred symbols in traditional weddings, depending on the material. Ethnic Malays tend to prefer yellow gold rings with floral or geometric engravings, whereas Chinese Malaysians generally opt for plain white or yellow gold bands (Hakim & Hashim, 2016).

Religious differences also influence ring usage. In Maluku, Indonesia, for instance, Christians and Muslims employ rings differently. For Christians, the wedding ring is a mandatory item—a lifelong symbol of marital love that must be worn until death. For Muslims in the region, the ring is more closely associated with custom and social identity, accepted within religious teachings but not strictly obligatory (Tutkey et al., 2025).

Furthermore, rings can carry deeply personal meanings that have little to do with romance or marriage. Woodward (2015) found that for many individuals, rings are treasured because of emotional connections to family members or close friends. One participant in her study valued a ring simply because it had been given by her cousin (Woodward, 2015).

In recent years, rings have acquired entirely new functions. With advances in technology, smart rings that track sleep, exercise, and other health metrics have entered the market. These devices are gaining popularity in the healthcare sector (Ramchandani, 2023). In this context, rings have come to symbolise self-care and personal improvement.

This shift has not occurred spontaneously. It has been actively facilitated by advertising on social media. In semiotic terms, advertising functions as a medium for transmitting messages between brands and consumers (Heriwati, 2018; Irawan, 2012). It possesses a natural capacity to influence consumer behaviour and encourage engagement with products (Siahaan, 2025; Syakur et al., 2018). Given the massive and diverse volume of advertisements encountered daily, they are remarkably effective at instilling new ideologies (Belch & Belch, 2021).

According to Parvathy (2014), advertising can be understood as myth—and myth, in this context, carries a dual meaning: it may function as a symbolic narrative about the human condition, or it may serve as a form of mystification (Parvathy, 2014). Within Barthes's semiotic framework, myth is an ideological process deeply embedded in culture and history. It presents culturally manufactured meanings as though they were timeless and natural. Chandler (2017) observes that images in advertising are particularly effective at naturalising these constructions. Advertising, therefore, operates as a modern form of myth-making, capable of reshaping the cultural meanings attached to ordinary objects such as rings.

Despite the rich history and cultural diversity surrounding rings, as well as the growing presence of ring-related advertisements on social media, very little research has systematically examined how advertising influences the changing meaning of rings. Studies that investigate how Instagram advertisements construct new mythologies around rings, detaching them from traditional associations with romantic or marital commitment remain scarce. Most existing research focuses either on historical or cultural meanings of rings (e.g., Howard, 2003; Sun, 2017; Tutkey et al., 2025) or on the semiotics of advertising more broadly (e.g., Siahaan, 2025; Taqdir et al., 2025), without explicitly connecting the two domains. Moreover, while Barthes's mythological analysis has been applied to various advertising contexts, its application to the specific object of rings in digital advertising remains underexplored.

This research addresses that gap. The study aims to determine how social media advertisements are shifting the meaning of rings, from symbols of interpersonal commitment to something else entirely. The following research questions guide

the investigation: (1) How do Instagram advertisements construct new mythological meanings for rings? and (2) What ideological messages are being naturalised through these advertisements?

Several theoretical contributions are offered. This study extends Barthes's mythological analysis beyond traditional media such as television and print into the context of Instagram-based digital advertising, where visual and textual signs are strategically combined to construct new cultural meanings. It also demonstrates that the same material object, a ring, can be mobilised to support opposing ideological narratives depending on the advertiser's semiotic strategy, thereby enriching the understanding of how material culture is continuously resignified through commercial discourse. Additionally, the study highlights the importance of chromatic signs and repetitive textual structures in myth construction, aspects often underexplored in classical Barthesian analysis. By addressing the gap in the literature regarding advertising-induced meaning shifts in material objects, this research offers a refined analytical model for decoding ideological transformations in contemporary consumer culture.

METHODS

This qualitative study employs Roland Barthes's theory of mythology as its analytical framework. Barthes's semiotic approach is particularly suited for examining how advertisements construct and naturalise new meanings for cultural objects. According to Barthes (1972), myth operates through a two-order semiological system. In the first-order system (denotation), a sign consists of a signifier (the physical form) and a signified (the literal concept). In the second-order system (connotation), the sign from the first level becomes a new signifier, which is then combined with a new signified to produce a myth—an ideological message that presents culturally manufactured meanings as natural and universal (Barthes, 1972; Chandler, 2017). This framework enables the researcher to uncover how advertisements transform the meaning of objects by embedding them within broader cultural narratives.

Data were collected through purposive sampling of Instagram advertisements featuring rings as the central object. Two advertisements were selected for in-depth analysis due to their contrasting semiotic strategies: one from UNICEF India promoting a "Promise Ring" for clean water access, and another from Gabit Smart Ring promoting a health-tracking wearable. Both advertisements were captured as screenshots, and the analysis focused on verbal text, visual imagery, colour schemes, typography, and compositional design. The selection of only two advertisements allows for a detailed, qualitative examination of the semiotic mechanisms at work, consistent with the exploratory nature of this study.

The analysis followed a systematic procedure based on Barthes's mythological framework. First, each advertisement was examined at the denotative level, where all observable elements, such as colours, objects, human figures, textual captions, and layout, were identified and described. Second, the analysis moved to the connotative level, where the cultural associations and symbolic meanings attached to those denotative elements were interpreted. Third, the myth constructed by each advertisement was identified by analysing how the combination of denotative and connotative meanings produced a new ideological message about the meaning of rings. To ensure the validity of the interpretation, the researcher conducted repeated readings of the advertisements and cross-checked the identified signs with established references on colour psychology and cultural symbolism. Additionally, peer debriefing was conducted with a colleague familiar with semiotic analysis to verify the consistency of the interpretations.

RESULTS AND DISCUSSION

Overview of the Advertisements

Advertisements are created using a combination of images, text, and colour schemes. This approach is intended to ensure that the advertisement effectively reaches its target consumers. According to Aqeel & Ali (2024), this combination conveys a message and is designed to influence target consumers to interact with the advertisement by shaping their social values and identity. This section presents the semiotic analysis of two Instagram advertisements featuring rings as the central object: (1) UNICEF India's "Promise Ring" and (2) Gabit Smart Ring. Each advertisement is analysed using Barthes's three-stage framework: denotation, connotation, and myth.



Picture 1: The Promise Ring Advertisement by UNICEF India
<https://www.instagram.com/unicefindia/> [source]



Picture 2: Gabit Smart Ring Advertisement on Instagram
<https://www.instagram.com/p/DM7uN-yv6mm/?igsh=YXE5a2ZhYmY0emNw> [source]

UNICEF India's "Promise Ring"

Denotative Level

Picture 1 presents a ring advertisement by UNICEF India titled The Promise Ring. The dominant colour is blue. The advertisement features a boy wearing a blue jacket, holding a glass under a faucet to collect water. His face is smiling and directed toward the camera. The advertisement includes several captions, most notably "This Promise Ring carries your promise of clean water for children." The UNICEF logo is displayed alongside the tagline 'for every child'.

Connotative Level

At the connotative level, the blue colour evokes associations with purity, tranquillity, and the natural colour of water. It also functions as the institutional colour of UNICEF, creating an immediate visual connection to the organisation's identity. Labrecque & Milne (2012) found that blue is the most preferred colour among both women and men, and that it significantly influences purchase decisions and brand recall. The smiling boy connotes happiness, well-being, and childhood innocence, suggesting that access to clean water leads to positive outcomes for children. The word "promise," repeated throughout the caption, carries connotations of commitment, reliability, and moral obligation. The UNICEF tagline "for every child" connotes universality, inclusivity, and the organisation's global mission.

Myth Constructed

Through the combination of these denotative and connotative elements, UNICEF constructs a new myth: that by wearing the Promise Ring, consumers are committing to ensuring fair human rights, specifically access to clean water. Unlike earlier eras, in which rings symbolised bonds of love, friendship, or brotherhood, this ring symbolises a commitment to providing basic human rights. The smiling face visually reinforces the message that access to clean water produces positive outcomes. The advertisers convey that by donating and receiving this commitment ring, consumers indirectly contribute to that child's well-being. The repeated use of the word "promise" activates emotional branding, connecting with target consumers by appealing to sensitive emotional points. This approach encourages consumers to interact with the advertiser and make a purchase. Emotional bonding enables consumers to associate their personal life experiences

with the advertised product. Heriwati (2018) similarly observes that emotional messages are designed to touch consumers' hearts and trigger actions based on feelings.

The dominant blue colour is consistent with both the colour of water and the base colour of the UNICEF logo. This serves a dual purpose: reminding consumers of water while also facilitating rapid recognition of the organising organisation. Aqeel & Ali (2024) state that colour is one of the semiotic tools used to convey ideological signals that influence consumers' social values and identity (Aqeel & Ali, 2024). Additionally, the tagline below the UNICEF logo emphasises that the organisation's work is dedicated to fulfilling the rights of all children.

The advertisers construct the myth that by donating and receiving this commitment ring, consumers have helped children in water-scarce areas. A further myth is that by wearing the ring, consumers have fulfilled their social responsibility toward these children. In Barthes's terms, the ring has been resignified: it is no longer a symbol of romantic love but a material manifestation of humanitarian citizenship.

Practical Implications for UNICEF and Non-Profit Organisations

From a practical standpoint, this UNICEF advertisement offers valuable lessons for non-profit organisations. It demonstrates that symbolic objects can serve as powerful tools for mobilising public participation when tied to emotionally resonant causes. The "Promise Ring" functions as a tangible reminder of an intangible commitment, thereby increasing donor engagement and brand loyalty. For social marketers, this case illustrates how emotional branding can transform a product into a vehicle for social identity construction, encouraging consumers to associate their personal values with the advertised object.

Gabit Smart Ring

Denotative Level

Picture 2 presents an advertisement for the Gabit Smart Ring. The dominant colours are grey, black, and green. The text repeats the phrases "for my mind," "for my body," "for my energy," "for my strength," and "for my focus" in black. The final text displays "for myself" in green. The bottom section lists the product's features. The product photo focuses on the interior of the ring, showcasing its modern design with a green sensor light. The features listed include 'water resistant', 'highly accurate', 'weighs only 3.1 grams', and '7+ days battery life'.

Connotative Level

At the connotative level, the green colour evokes associations with health, vitality, and wellness. Black connotes modernity, sophistication, and technology. The combination of grey, black, and green creates a visual impression of a sleek, contemporary product designed for health-conscious consumers. The repetitive text, such as "for my mind," "for my body," "for my energy," "for my strength," "for my focus," and "for myself", connotes individualism, self-care, and personal empowerment. The illuminated sensor inside the ring connotes advanced technology, precision, and innovation. The listed features, namely water resistance, accuracy, light weight, and long battery life, connote convenience, reliability, and practicality. Labrecque & Milne (2012) observe that colour influences consumer emotions; green symbolises health and vitality, while black symbolises modernity (Labrecque & Milne, 2012). Colour psychology, they argue, is particularly powerful in advertising because it can influence emotions and subsequent consumer actions.

Myth Constructed

Through the combination of these elements, the Gabit Smart Ring advertisement constructs a distinct myth: that the ring is no longer a symbol of a bond or commitment between individuals, but rather a form of proof of self-improvement and a willingness to live a healthier and more disciplined life. The repetitive first-person phrasing emphasises that the product is exclusively for the wearer's personal development. The illuminated sensor light symbolises the integration of technology into daily life, suggesting that self-monitoring is the path to optimal living. The dark colour palette, which contrasts with conventional gold or silver rings used in engagements and weddings, reinforces the break from tradition.

In Barthes's terms, the smart ring has been resignified: it is no longer a token of relational commitment but a tool for self-optimisation. This myth aligns with contemporary wellness culture, which emphasises individual responsibility for

health and personal growth. The advertisement positions the wearer as someone who values efficiency, discipline, and technological sophistication, values presented as natural and desirable in modern life.

Practical Implications for Technology Marketers and Product Designers

Practically, the Gabit Smart Ring advertisement offers insights for product designers and technology marketers. It shows that functional features alone are insufficient to drive consumer adoption; the advertising narrative must also reframe the product's cultural identity to appeal to consumers' aspirations for self-improvement. The strategic use of first-person repetition ("for my mind," "for my body") constructs an individualised narrative that positions the ring as a tool for personal optimisation, a strategy that can be adopted by brands seeking to enter the wellness technology market. For designers, this suggests that the visual and textual presentation of a product is as important as its technical specifications in shaping consumer perception.

Comparative Discussion: Two Myths, One Object

The two advertisements analysed above demonstrate that rings can be mobilised to support opposing ideological narratives depending on the advertiser's semiotic strategy. UNICEF constructs a myth of collective moral duty, wherein the ring symbolises the wearer's commitment to humanitarian values and social responsibility. Gabit constructs a myth of individual self-optimisation, wherein the ring symbolises the wearer's commitment to personal health, discipline, and self-care.

These two myths are not contradictory in a logical sense; rather, they reflect different cultural logics. One draws on discourses of global citizenship and human rights, whereas the other draws on discourses of wellness, technology, and neoliberal individualism. What unites them is the semiotic process through which they are constructed; both rely on careful selection of colours, images, textual repetition, and emotional appeals to naturalise their respective ideologies.

Myths in advertising function to shape consumers' views of the world through the process of semiotics, wherein signs in advertising act as amplifiers of certain values. These myths reinforce dominant cultural values and make consumers feel that they are part of a larger social narrative (Taqdir et al., 2025). The advertisements above are inseparable from semiotic elements, both verbal and nonverbal, such as images, and thus they can construct new myths for targeted consumers. According to Chandler (2017), these elements are of critical importance in semiotics for shaping the perspective and ideology of target consumers. In other words, advertising is a highly effective tool for achieving this objective.

Theoretical Contributions Revisited

The findings of this study make several contributions to semiotic theory and advertising studies. First, by applying Barthes's mythological framework to Instagram advertisements, this study demonstrates that digital advertising functions as a powerful site of contemporary myth-making. The two cases show that myth is not a relic of pre-modern cultures but an active ideological process that operates through the everyday media consumed by the public.

Second, this study shows that the ring can be resignified to serve opposing ideological narratives. This finding extends Barthes's observation that myths are historically and culturally contingent by demonstrating that even within the same historical moment, competing myths can coexist around the same object, depending on the semiotic strategies employed by different advertisers.

Third, the study highlights the importance of chromatic signs and repetitive textual structures in the construction of myths, aspects that are often underexplored in classical Barthesian analysis, which tends to focus more on linguistic and photographic signs. By drawing attention to the role of colour psychology and repetition in advertising, this research offers a refined analytical model for decoding ideological shifts in consumer culture.

Finally, the study confirms Barthes's assertion that myth presents culturally manufactured meanings as natural and timeless. Both advertisements present their respective myths, humanitarian citizenship and personal optimisation, as

natural and inevitable, obscuring the commercial and ideological interests that drive them. This critical insight is essential for understanding how advertising shapes consumer identity and cultural values in the digital age.

Limitations and Suggestions for Further Research

Several limitations should be acknowledged to provide a balanced assessment of this study's contributions. First, the analysis is based on only two Instagram advertisements, which limits the generalizability of the findings to other platforms or cultural contexts. The semiotic strategies employed on Instagram may differ significantly from those on TikTok, YouTube, or Facebook, where different affordances and audience expectations shape advertising content. Second, the analysis is confined to the semiotic content of the advertisements and does not incorporate audience reception data, such as interviews or surveys with consumers. Without such data, it is difficult to ascertain whether the myths identified in the advertisements are actually internalised by target consumers or whether alternative interpretations exist. Third, the study focuses exclusively on English-language advertisements from UNICEF India and Gabit Smart Ring, which may reflect Western or globalised advertising norms rather than local cultural logics.

Based on these limitations, several directions for future research are suggested. Comparative studies across multiple social media platforms could examine how platform-specific features, such as video versus static images, algorithm-driven distribution, or interactive features, influence mythological construction. Empirical research incorporating consumer interviews, focus groups, or surveys would be valuable to understand how audiences interpret and internalise the new meanings constructed by advertisements, and whether demographic factors such as age, gender, or cultural background mediate these interpretations. Longitudinal studies could track whether the new myths surrounding rings, such as self-care or humanitarianism, persist or fade over time, and how they interact with broader cultural shifts. Cross-cultural comparative research would be beneficial to investigate how local traditions, religious values, and social norms mediate global advertising narratives, particularly in non-Western contexts where the meaning of rings may differ significantly. Finally, future studies could expand the object of analysis beyond rings to other material objects, such as clothing, jewellery, or technology, that are undergoing similar semiotic transformations through digital advertising.

CONCLUSION

Advertising is a powerful tool with persuasive qualities. Advertisements contain important semiotic elements such as text and images that can change ideologies and create new mythologies. Based on the discussion above, advertisements for rings play with colours, images, models, and products to personally appeal to target consumers. Advertisers attempt to shift the concept of rings from being a symbol or sign of marital commitment, as it has been traditionally, to a symbol of commitment to humanity by UNICEF and a symbol of self-control and improvement by the GABIT smart ring.

By applying Roland Barthes' mythological analysis to the realm of Instagram-based visual marketing in the digital world, this study theoretically advances the field of advertising semiotics research. The results showed that myth formation in social media advertising relies on colour selection, product design, and repetitive textual patterns, in addition to the use of language and visual cues. The study enriches the treasury of knowledge on cultural reinterpretation of material objects by highlighting the ideological transformation of the ring, a cultural artefact that has deep historical roots, into a symbol of social obligation and personal growth. The research also broadens our understanding of how myths play a role as drivers of Consumer Action in modern digital advertising through an in-depth analysis of the semiotic strategies used by commercial as well as non-profit advertisers.

Practically, the findings offer actionable insights for commercial advertisers, product designers, and non-profit organisations. Understanding the semiotic mechanisms of myth-making enables the strategic deployment of visual and textual elements, such as colour psychology, repetition, and emotional branding, to effectively reposition products within consumer consciousness. For non-profit organisations such as UNICEF, this research underscores the effectiveness of emotional branding through symbolic objects, as visual elements including images and logos significantly influence consumer attitude toward the advertisement and donation behaviour. Practitioners are therefore advised to consider the semiotic dimensions of their advertising strategies, as colours, images, and textual narratives collectively shape consumer perceptions and behavioural intentions.

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The Role of Artificial Intelligence (AI) in Early Childhood Education Learning Evaluation

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ABSTRACT

This qualitative study examines the role of Artificial Intelligence (AI) in early childhood education learning evaluation. Data were obtained through a review of recent literature and interviews with 10 purposively selected teachers, lecturers, and educational technology practitioners. The findings indicate that AI can support adaptive and personalised assessment, provide timely feedback, integrate data across learning environments, and facilitate the early identification of children's needs. However, its implementation is constrained by limited teacher digital competency, unequal technological infrastructure, and concerns about children's data privacy. AI should therefore complement, rather than replace, teachers and be introduced gradually through educator training, infrastructure development, appropriate policies, and robust data protection.

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INTRODUCTION

This research topic is the role of Artificial Intelligence (AI) in Early Childhood Education (PAUD) learning evaluation. Early childhood learning evaluation is a fundamental aspect for understanding children's cognitive, social, emotional, and motor development. However, conventional evaluation practices are often generic, less adaptive, and unable to capture the dynamics of child development holistically. The presence of AI offers a new approach that is more adaptive, personalised, and data-driven, making it relevant for research in the context of early childhood education. The significance of this research lies in its contribution to addressing the need for a more contextual and evidence-based evaluation system. By utilising AI, teachers and parents can obtain a real-time picture of children's development, while simultaneously strengthening educational transparency and accountability. This research is also important because it highlights the challenges of AI implementation, such as the limitations of educators' digital competencies, technological infrastructure, and ethical issues regarding the use of children's data.

The research questions posed are (1) What is the role of AI in supporting adaptive and personalised evaluation in PAUD?, (2) How does AI function as a contextual and evidence-based evaluation tool?, (3) What are the challenges and implications of implementing AI in PAUD evaluation?. Theories considered include the Zone of Proximal Development (Vygotsky, 1978), Piaget's constructivism (1972), Bronfenbrenner's ecological theory (1979), Gardner's multiple intelligences (1993), and Rogers' diffusion of innovation (2003). These theories provide a conceptual framework for understanding how AI can support adaptive, contextual, and inclusive evaluation. The hypothesis proposed is that AI contributes significantly to improving the quality of PAUD evaluation through personalisation, cross-environment data integration, and early detection of children's special needs, although its implementation faces challenges in teacher competency, infrastructure, and data ethics.

The operational definitions in this study are (1) Artificial Intelligence (AI), an intelligent computing system capable of automatically processing child development data and providing real-time feedback, (2) Adaptive evaluation, an assessment that adjusts indicators based on the child's individual responses and needs. (3) Contextual evaluation, an assessment that takes into account the child's cultural, social, and environmental background, (4) Personalization, the ability of the AI system to adjust evaluation content according to the child's learning style and multiple intelligences, (5) Child data ethics, the principles of privacy protection, security, and parental consent in the use of child development data. Historically, previous studies have shown that AI can strengthen data-based evaluation and improve learning effectiveness. However, other studies emphasise the need for educator readiness and ethical regulations. By referring to these studies, this study is directed at providing a comprehensive understanding of the potential, challenges, and implications of using AI in PAUD evaluation.

METHODS

This research employed qualitative methods, incorporating a literature review approach combined with exploratory interviews. This approach was chosen because the research aimed to deeply understand the role of Artificial Intelligence (AI) in early childhood education evaluation, rather than simply measuring variables quantitatively.

Empirical data were obtained from 10 purposively selected informants. They included early childhood education teachers, early childhood education lecturers, and educational technology practitioners. Their real identities are not disclosed; pseudonyms are used to maintain confidentiality.

Participant Code	Age (years)	Profession/Role	Length of Experience	Socioeconomic Background	Work/Study Context
R1 – R3	28–32	Early Childhood Education Teacher	5–7 years	Intermediate	Local PAUD institutions
R4 – R6	33–38	AUD Lecturer	8–12 years	Intermediate	College
R7 – R10	39–45	Educational Technology Practitioner	10–15 years	Intermediate	Community/Educational Institution

Table 1. Characteristics of Research Participants

Note: The name of the institution is not mentioned to maintain anonymity.

The data collection instruments consisted of semi-structured interview guidelines and an open-ended questionnaire. The data collection procedure was carried out in four stages:

Stage	Activity	Instrument	Duration
1	Identify sources	Purposive sampling list	-
2	Online/offline interviews	Semi-structured interview guidelines	45–60 minutes
3	Documentation of results	Audio recordings, field notes	-
4	Triangulation with literature	Open questionnaire, document analysis	-

Table 2. Data Collection Procedures

The data were analysed using qualitative thematic analysis. The analysis process included: (a) Initial coding, marking themes from interview transcripts, (b) Categorisation, grouping codes into categories such as “evaluation adaptivity,” “technological challenges,” and “children’s data ethics.” (c) Interpretation, connecting empirical findings with relevant theories (Vygotsky, Piaget, Bronfenbrenner, Gardner, Rogers). Thematic analysis was chosen because it is able to capture patterns and meanings in qualitative data, thus aligning with the research objectives that emphasise in-depth understanding.

RESULTS AND DISCUSSION

Results

Analysis from 10 sources revealed three main focuses: adaptive and personalised evaluation, contextual and evidence-based evaluation, and challenges of AI implementation. Regarding Adaptive and Personal Evaluation, Early Childhood Education (R1–R3) teachers observed that AI helps adjust the difficulty of evaluations to suit the child's abilities.

"I saw that children who typically struggled with motor skills no longer felt stressed because the AI system provided incremental training tailored to their abilities. (R1 transcript)." This supports the hypothesis that AI enhances personalised learning.

In addition, in the aspects of Contextual and Evidence-Based Evaluation, educational technology practitioners (R7–R10) emphasise the integration of data across environments.

"AI reports aren't just numbers, but also include developmental charts and activity recommendations. This makes it easier for parents to understand their child's condition. (transcript R8)." This finding aligns with Bronfenbrenner's ecological theory, which emphasises the influence of the micro and macro environment.

Meanwhile, in terms of Implementation Challenges, most of the speakers highlighted the limitations of teachers' digital competencies and data ethics issues.

"Teachers often only use basic features, even though more detailed data analysis is available. This is due to a lack of training. " (R4 transcript)

"Children's data privacy must be protected. Without clear regulations, AI could cause problems. (R9 transcript)"

Summary of findings can be seen in Table 3 below with explanations provided.

Focus of Findings	Resource Person Observation	Transcript Example	Brief Explanation
Adaptive & personal evaluation	AI adjusts the difficulty level according to the child's ability.	R1: "Children with motor difficulties are no longer stressed, because of the gradual training."	AI supports personalisation of learning, reducing evaluative pressure
Contextual evaluation & evidence	AI integrates home–school data to produce holistic reports	R8: "AI reports are not just numbers, but graphs and activity recommendations."	AI reports are more comprehensive, making it easier for teachers and parents to understand progress.
Implementation challenges	Limited teacher competency, infrastructure, and child data privacy issues	R4: "Teachers only use basic features." R9: "Children's data privacy must be maintained."	The main barriers are digital literacy, access to technology, and child data protection.

Table 3. Summary of Findings

Discussion

The results of the study showed that AI was able to adjust evaluation indicators according to children's abilities in real time. Early childhood education teacher informants (R1–R3) observed that children with motor difficulties no longer felt stressed because the AI system provided step-by-step exercises. This supports the hypothesis that AI enhances personalised learning. This finding is consistent with the Zone of Proximal Development theory (Vygotsky, 1978), which emphasises the importance of support according to a child's developmental level. Furthermore, Gardner's (1993) theory of multiple intelligences is relevant because AI can adjust evaluations based on a child's learning style (visual, auditory, kinesthetic). Thus, AI acts as a facilitator, making evaluations more humane and responsive.

Educational technology practitioners (R7–R10) emphasised that AI can integrate data from home, school, and the community. AI reports not only include scores but also progress charts and activity recommendations. This strengthens the validity of evaluations and aligns with Bronfenbrenner's (1979) ecological theory, which emphasises the influence of micro and macro environments on child development. Studies by Marzano (2025) also support this finding, stating

that evidence-based evaluations increase accountability and transparency. With AI, teachers and parents gain a more comprehensive picture of a child's development, enabling more appropriate interventions.

Most interviewees highlighted teachers' limited digital competency, unequal technological infrastructure, and ethical issues surrounding children's data privacy. Teachers (R4) stated that they often only use basic features due to a lack of understanding of available data analysis. Practitioners (R9) emphasised the importance of regulations to protect children's privacy. These findings align with Rogers' (2003) diffusion of innovation theory, which emphasises the need for socialisation, training, and policy support for the effective adoption of new technologies. Adams, C., Pente, P., Lemermeyer, G., & Rockwell, G. (2023) also emphasise that without an understanding of ethics, the use of AI risks data manipulation or privacy violations.

Focus of Findings	Interviewee Observation (Verbal)	Supporting Theory	Scientific Interpretation
Adaptive & personal evaluation	R1: "Children with motor difficulties are no longer stressed, because of the gradual training."	<i>Vygotsky (ZPD), Gardner (MI)</i>	AI strengthens learning personalisation and supports targeted interventions.
Contextual evaluation & evidence	R8: "AI reports are not just numbers, but graphs and activity recommendations."	<i>Bronfenbrenner (Ecology)</i>	AI improves the validity of evaluations by integrating data across environments.
Implementation challenges	R4: "Teachers only use basic features." R9: "Children's data privacy must be maintained."	<i>Rogers (Diffusion of Innovation)</i>	The main barriers are digital literacy, access to technology, and child data protection.

Table 4. Relationship of Research Results with Theory and Hypothesis

This confirms that AI contributes significantly to improving the quality of early childhood education evaluations through adaptability, personalisation, and cross-environment data integration. However, successful implementation depends heavily on educator readiness, policy support, and ethical regulations. Therefore, AI is not a substitute for teachers, but rather a pedagogical partner that strengthens teachers' capacity to understand and respond to children's needs.

CONCLUSION

This study shows that AI can strengthen early childhood education evaluation by supporting adaptive and personalised assessment, integrating developmental data across learning environments, and providing more informative feedback to teachers and parents. However, its effective use depends on educators' digital competence, adequate infrastructure, clear policies, and strong protection of children's data. AI should therefore complement, rather than replace, teachers and be introduced gradually through appropriate training, resources, and ethical safeguards.

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Integrating Augmented Reality, Artificial Intelligence, and Graphic Design to Enhance Learning Quality in Higher Education

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ABSTRACT

This study developed and evaluated interactive learning media integrating augmented reality (AR), artificial intelligence (AI), and graphic design principles for higher education. Using a Design-Based Research approach, the media were iteratively designed, implemented, and refined with undergraduate graphic design students at Universitas Sains Indonesia. Learning effectiveness was assessed through pre- and post-tests, engagement measures, user-experience evaluation, observations, and interviews. Results showed significant improvement in learning outcomes, with a moderate normalised gain ($N\text{-Gain} = 0.60$), a large effect size (Cohen's $d = 0.85$), and a significant difference between pre- and post-test scores ($p < 0.001$). Students also reported high engagement and positive user experience. Qualitative findings indicated that AR supported immersive conceptual visualisation, while AI enabled adaptive feedback and personalised learning. The findings suggest that combining AR, AI, and graphic design can create an interactive, adaptive, and visually effective learning environment that enhances learning outcomes and student engagement.

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INTRODUCTION

The rapid advancement of digital technology in the era of Society 5.0 has fundamentally transformed higher education, particularly in terms of learning approaches, the role of technology, and student characteristics. Education is no longer oriented toward linear knowledge transmission but has shifted toward creating adaptive, collaborative, and technology-enhanced learning experiences. This transformation necessitates the development of innovative learning media capable of accommodating the needs of digital-native students who are accustomed to visual, multimodal, and interactive environments (Singh, 2024; Radianti et al., 2020; Bower et al., 2020). In this context, the integration of Augmented Reality (AR) and Artificial Intelligence (AI) has emerged as a strategic approach to improving the quality of learning in higher education (Zawacki-Richter et al., 2021; Chen et al., 2022).

AR technology enables the integration of virtual objects into real-world environments in real time, creating contextual and immersive learning experiences. In educational settings, AR has been widely utilised to visualise abstract concepts, enhance student engagement, and improve conceptual understanding through direct interaction (Christou, 2026; Ibáñez & Delgado-Kloos, 2020; Akçayır & Akçayır, 2021). Within graphic design education, visualisation is a core competency that extends beyond aesthetics to include the effective communication of ideas through visual media. Therefore, the application of AR in graphic design learning has significant potential to support students in understanding design principles in a more concrete and practical manner.

A growing body of research indicates that AR-based learning can significantly improve student engagement, motivation, and learning outcomes. By enabling interaction with three-dimensional visual objects, AR fosters an exploratory learning environment that goes beyond conventional two-dimensional media (Singh, 2024; Makransky & Petersen, 2021). Furthermore, AR supports experiential learning approaches, which emphasise learning through direct experience

and have been proven effective in enhancing both conceptual understanding and practical skills (Christou, 2026; Radianti et al., 2020).

On the other hand, AI introduces a new paradigm in education through its ability to analyse learning data and provide adaptive responses tailored to individual learners. AI-driven systems can personalise content delivery, adjust learning difficulty levels, and provide real-time feedback based on students' performance and learning behaviour. This leads to more efficient and personalised learning experiences while promoting self-regulated learning (Gill, 2024; Zawacki-Richter et al., 2021). Additionally, AI contributes to the development of critical thinking and adaptive skills, which are essential in navigating the complexity of digital information environments (Hwang & Tu, 2021; Chen et al., 2022).

The integration of AR and AI within learning media creates an ecosystem that is not only interactive but also intelligent and responsive. The combination of these technologies enables the development of learning environments that adapt to user needs while delivering rich visual experiences. Recent studies have demonstrated that the integration of AR and AI can significantly enhance learning quality, particularly in visual- and practice-based learning contexts (Nurlina et al., 2025; Shadiev & Yang, 2020). This is highly relevant to graphic design education, which requires a balance between theoretical understanding, visual exploration, and technical skills.

Despite these advantages, the implementation of AR and AI in education still faces several challenges. One of the primary issues is the lack of integration between technological development and appropriate pedagogical frameworks. Many studies focus heavily on technological innovation without adequately addressing how these technologies can be effectively integrated into instructional design (Zawacki-Richter et al., 2021). Moreover, the role of graphic design principles is often overlooked in the development of technology-based learning media, even though visual communication plays a critical role in determining the effectiveness of information delivery (Norman, 2021; Kurniawan & Naradika, 2026).

Furthermore, previous studies have highlighted that the success of technology-enhanced learning is not solely dependent on technological sophistication but also on the quality of instructional design and user experience (Gill, 2024; Hassenzuhl & Tractinsky, 2020). This indicates the need for a multidisciplinary approach that integrates technology, pedagogy, and graphic design in a comprehensive manner, where aesthetic and functional aspects of visual communication play a crucial role in enhancing user engagement and learning effectiveness (Kurniawan & Naradika, 2026).

A significant research gap can be identified in the limited number of studies that integrate AR and AI simultaneously within a graphic design-based learning framework. Most existing research tends to examine AR and AI separately and focuses primarily on technological aspects rather than visual communication and design quality (Akçayır & Akçayır, 2021; Chen et al., 2022). In addition, research specifically addressing the development of AR- and AI-based learning media in the context of higher education graphic design programs remains scarce.

Beyond this gap, there is also a growing demand for learning approaches that are more aligned with the needs of the creative industry. The graphic design industry today requires not only technical proficiency but also creativity, problem-solving skills, and an understanding of user experience (Norman, 2021). Therefore, learning media must be designed to reflect these demands through the integration of advanced technologies and effective visual design principles.

In the context of Universitas Sains Indonesia, particularly in the graphic design study program, the need for innovative learning media is increasingly urgent in response to the evolving demands of the creative industry. Current learning practices that are still dominated by conventional approaches may limit students' creativity and experiential learning opportunities. Therefore, it is essential to develop innovative learning media that can significantly enhance the quality of learning.

Based on the above considerations, this study proposes an innovative approach through the development of interactive learning media based on AR and AI integrated with graphic design principles. The novelty of this research lies in the

integration of three key components—AR technology, artificial intelligence, and graphic design—into a comprehensive learning system. This approach is expected to produce learning media that are not only interactive and adaptive but also visually effective and capable of enhancing students' learning experiences.

Accordingly, the objective of this study is to develop interactive learning media based on Augmented Reality and Artificial Intelligence through the integration of graphic design to improve the learning quality of graphic design students at Universitas Sains Indonesia. This research is expected to contribute theoretically to the development of technology-enhanced learning models and practically to improving the effectiveness of higher education learning, particularly in the field of graphic design.

METHODS

Research Design

This study employed a Design-Based Research (DBR) approach to develop and evaluate interactive learning media integrating Augmented Reality (AR), Artificial Intelligence (AI), and graphic design principles. DBR was selected due to its suitability for developing educational innovations through iterative cycles in real-world contexts.

The research followed four iterative phases: (1) problem analysis, (2) design and development, (3) implementation, and (4) evaluation and refinement. These phases were conducted cyclically to ensure continuous improvement of the developed learning media.

Research Setting and Participants

The study was conducted at Universitas Sains Indonesia, within the Graphic Design Study Program. Participants were selected using purposive sampling and included:

1. 30–50 undergraduate students
2. 2–3 lecturers as subject matter experts
3. 2 media/design experts for validation

All participants had prior experience with digital learning environments.

Development Procedure

The development process followed the DBR iterative model:

1. **Problem Analysis**
Identification of learning issues through observation, interviews, and document analysis. The results indicated limited interactivity, lack of immersive visualisation, and absence of personalised learning features.
2. **Design and Development**
The learning media was designed by integrating:
 - a. AR for 3D visualisation
 - b. AI for adaptive feedback and personalisation
 - c. Graphic design principles (layout, typography, colour, visual hierarchy, UX)
3. **Implementation**
The system was implemented in classroom settings over 4–6 weeks. Students engaged in AR-based visualisation activities, interactive exercises, and AI-supported feedback sessions.
4. **Evaluation and Refinement**
Iterative evaluation was conducted based on user feedback, learning outcomes, and expert validation to refine the system.

Variables and Operational Indicators

1. **Learning Quality**
Measured through:
 - a. Conceptual understanding (pre-post test)

- b. Practical design skills (rubric-based assessment)
 - c. Knowledge retention (delayed test)
 - d. Transfer ability (project-based task)
- 2. Student Engagement
Measured across three dimensions:
 - a. Behavioural (participation, interaction)
 - b. Emotional (interest, motivation)
 - c. Cognitive (effort, critical thinking)
- 3. User Experience (UX)
Measured through:
 - a. Usability
 - b. Visual design quality
 - c. Interaction responsiveness
 - d. User satisfaction

Data Collection Techniques

Data were collected using a mixed-method approach:

- a. Pre-test and post-test to measure learning improvement
- b. Questionnaires (Likert scale 1–5) to assess engagement and UX
- c. Observations to analyse student interaction
- d. Interviews to obtain in-depth qualitative insights
- e. Expert validation for content and media quality

Research Instruments

The instruments used in this study included:

- a. Learning outcome tests
- b. Engagement questionnaire
- c. User experience (UX) questionnaire
- d. Media validation checklist
- e. Interview guidelines

All instruments were tested for validity and reliability prior to use.

Data Analysis

1. Learning Improvement (N-Gain)

$$g = \frac{Posttest - Pretest}{Max - Pretest}$$

Used to measure the effectiveness of learning improvement:

- a. $g > 0.7$ (high)
- b. $0.3 < g \leq 0.7$ (moderate)
- c. $g \leq 0.3$ (low)

2. Statistical Significance (Paired Sample t-test)

$$t = \frac{\bar{X}_d}{S_d / \sqrt{n}}$$

Used to determine significant differences between pre-test and post-test results ($p < 0.05$).

3. Effect Size (Cohen's d)

$$d = \frac{M_2 - M_1}{SD_{pooled}}$$

Used to measure the magnitude of the treatment effect:

- a. 0.2 (small)
- b. 0.5 (medium)
- c. ≥ 0.8 (large)

4. Reliability Test (Cronbach's Alpha)

$$\alpha = \frac{k}{k-1} \left(1 - \frac{\sum \sigma_i^2}{\sigma_t^2} \right)$$

Used to ensure instrument reliability:

- a. $\alpha \geq 0.7$ (acceptable)
- b. $\alpha \geq 0.8$ (good)

5. Qualitative Analysis

Qualitative data from interviews and observations were analysed using thematic analysis, including coding, categorisation, and triangulation to ensure validity.

Validity and Reliability

To ensure rigour:

- a. Content validity through expert review
- b. Construct validity aligned with research variables
- c. Reliability tested using Cronbach's Alpha
- d. Data triangulation across methods

Ethical Considerations

- a. Informed consent obtained from all participants
- b. Participation was voluntary
- c. Data confidentiality and anonymity were ensured

Research Flow

The research followed an iterative cycle:

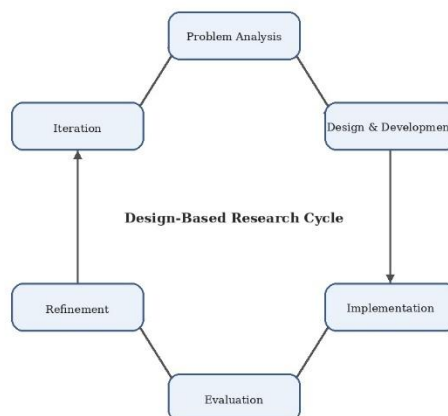


Chart 1. Design-Based Research (DBR) Cycle

RESULTS AND DISCUSSION

The results of this study demonstrate that the integration of Augmented Reality (AR), Artificial Intelligence (AI), and graphic design principles significantly enhances learning quality, student engagement, and user experience in graphic design education. The findings are presented through a combination of quantitative analysis, qualitative insights, and theoretical interpretation to provide a comprehensive understanding of the effectiveness of the proposed learning media.

Learning Outcome Improvement

The effectiveness of the developed learning media was evaluated through pre-test and post-test assessments. The results are presented in Table 1.

Variable	Pre-test Mean	Post-test Mean	N-Gain
Learning Outcome	63.2	85.5	0.60

Table 1. Learning Outcome Improvement

The normalised gain score was calculated using:

$$g = \frac{Posttest - Pretest}{Max - Pretest}$$

The N-Gain value of 0.60 falls within the moderate category, indicating that the AR–AI-based learning media is effective in improving students' understanding and practical skills.

To verify statistical significance, a paired sample t-test was conducted:

$$t = \frac{\bar{X}_d}{S_d / \sqrt{n}}$$

The results showed $p < 0.001$, confirming a statistically significant difference between pre-test and post-test scores. Furthermore, the effect size was calculated:

$$d = \frac{M_2 - M_1}{SD_{pooled}}$$

The obtained value of Cohen's $d = 0.85$ indicates a large effect size, suggesting that the intervention has a strong practical impact. The combination of moderate N-Gain and large effect size indicates that the learning media is both statistically significant and educationally meaningful.

These findings suggest that AR enhances conceptual visualisation, while AI contributes to adaptive learning, resulting in improved student performance.

Student Engagement

Student engagement was measured across behavioural, emotional, and cognitive dimensions. The results are summarised in Table 2.

Dimension	Mean	Category
Behavioral	4.32	High
Emotional	4.45	Very High
Cognitive	4.28	High
Overall	4.35	High

Table 2. Student Engagement Results

The results indicate a high level of engagement, with emotional engagement showing the highest score. This suggests that the immersive and interactive nature of AR significantly increases students' interest and motivation. Behavioural

engagement reflects active participation, while cognitive engagement indicates deeper involvement in learning processes.

User Experience (UX)

User experience was evaluated to assess usability, visual design, interaction, and satisfaction. The results are shown in Table 3.

Dimension	Mean	Category
Usability	4.30	High
Visual Design	4.52	Very High
Interaction	4.34	High
Satisfaction	4.47	Very High
Overall	4.41	High

Table 3. User Experience Results

The highest score was observed in the visual design dimension, highlighting the importance of integrating graphic design principles in learning media development. High usability and interaction scores indicate that the system is user-friendly and responsive, while high satisfaction reflects positive user perception.

Qualitative Findings

Qualitative data from interviews and observations support the quantitative findings. Students reported that AR-based visualisation helped them better understand abstract design concepts through three-dimensional representation. AI-based feedback was perceived as useful for improving design skills and guiding learning progress.

Additionally, students expressed increased motivation and reduced boredom, with many preferring this approach over conventional learning methods. These findings confirm that the integration of AR and AI creates a more engaging and effective learning environment.

Comparative Analysis

From a comparative perspective, the proposed AR–AI learning model demonstrates superior performance compared to conventional and single-technology approaches.

Conventional learning methods, which rely on static materials and one-way instruction, typically result in moderate learning outcomes and lower engagement. AR-based learning improves visualisation and engagement but lacks personalisation, while AI-based learning provides adaptive features but lacks immersive visualisation.

In contrast, the integration of AR and AI combines immersive visualisation with adaptive learning capabilities, resulting in higher learning outcomes, greater engagement, improved personalisation, and better user experience. This indicates a synergistic effect, where the combined use of technologies produces greater impact than individual implementations.

Conceptual Model Discussion

Based on the findings, this study proposes a conceptual framework in which learning effectiveness is influenced by the interaction of three main components:

1. Augmented Reality (AR) enhances visual cognition and engagement through immersive 3D interaction.
2. Artificial Intelligence (AI) supports adaptive learning and personalised feedback.
3. Graphic Design Principles ensure effective communication, usability, and visual clarity.

These components interact within the learning process to support experiential learning, improve cognitive engagement, and enhance user experience. The integration of these elements leads to improved learning quality, higher engagement, and better satisfaction.

This model contributes theoretically by demonstrating the importance of integrating technology, pedagogy, and visual design in educational innovation.

Limitations and Future Research

Despite its contributions, this study has several limitations. First, the research was conducted within a single institution with a limited sample size, which may affect generalizability. Second, the implementation period was relatively short, limiting the observation of long-term learning effects. Third, the effectiveness of the system may depend on technological infrastructure, such as device capability and internet access. Finally, the study focused specifically on graphic design education, limiting its applicability to other disciplines.

Future research is recommended to expand the study across multiple institutions and disciplines to improve generalizability. Longitudinal studies are needed to examine long-term learning outcomes and skill development. Further research should also explore the integration of advanced AI technologies, such as generative AI and learning analytics, to enhance personalisation. Additionally, experimental designs with control groups are suggested to provide stronger causal evidence. Finally, future studies should investigate the alignment of AR–AI-based learning with industry practices to ensure relevance to professional contexts.

Synthesis

Overall, the findings confirm that the integration of AR, AI, and graphic design principles provides a comprehensive and effective approach to improving learning quality in higher education. This approach not only enhances learning outcomes but also creates a more engaging, adaptive, and meaningful learning experience.

CONCLUSION

Proposed conclusion:

This study demonstrates that integrating augmented reality, artificial intelligence, and graphic design principles can enhance learning in higher education graphic design courses. The developed media produced a significant improvement in learning outcomes, with a moderate normalised gain and a large effect size. Students also reported high engagement and positive user experience, particularly in relation to visual design and satisfaction. AR supported immersive visualisation of design concepts, while AI enabled adaptive feedback and personalised learning. Together, these technologies created a more interactive, learner-centred environment than conventional or single-technology approaches.

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An Ecofeminist Analysis of the Lyrics of *Colours of the Wind* in Disney's Pocahontas (1995)

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ABSTRACT

This study examines the lyrics of “Colors of the Wind” from Disney’s animated film Pocahontas (1995) as a discursive site of resistance to colonial paradigms. Performed by Judy Kuhn, the song serves as a pivotal focalization of Pocahontas’s Indigenous wisdom in opposition to Western expansionism. The research investigates how the lyrics construct colonial settlers as “alien” subjects who are ecologically estranged while simultaneously articulating an alternative human–nature relationship grounded in an ecofeminist ethics of care. Employing ecofeminist literary criticism, the study analyzes the lyrics through a close reading informed by the conceptual frameworks of the logic of domination, master identity, and the mechanistic death-of-nature paradigm. The findings reveal that colonial figures are represented as “aliens” through processes of othering and a mechanistic worldview that reduces the Earth to a “dead thing” or a mere object of exploitation. Their inability to comprehend the language of nature reveals a profound ontological disconnection from local ecological networks, effectively rendering them outsiders within the very environment they seek to conquer. In contrast, Pocahontas’s voice rearticulates nature as a living entity, foregrounding a circular model of interconnectedness as a counter-discourse to linear and anthropocentric colonial hierarchies. The study concludes that the settlers’ status as “aliens” is an ideological consequence of the colonizers’ master identity, which rejects ecological relationality. Ultimately, the study underscores the vital contribution of ecofeminist readings of popular culture to critiques of the colonial and patriarchal logics that continue to underlie contemporary ecological crises.

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INTRODUCTION

The song “Colors of the Wind” is one of the main soundtracks of Disney’s animated film Pocahontas (1995), produced by Walt Disney Feature Animation. The film was released as part of a popular cultural project that represents the encounter between Native Americans and European colonizers. In this study, Colors of the Wind is positioned as the primary object of analysis, examined independently from the film’s broader visual narrative. The song is performed at the moment of the first encounter between Pocahontas and John Smith.

The central phenomenon addressed in this research is the manner in which the song’s lyrics represent the colonizer’s ecologically alienated worldview—a perspective that constructs nature as a lifeless object separate from human existence. Through its lyrical discourse, Colors of the Wind simultaneously critiques the colonizer’s inability to comprehend ecological interconnectedness within the local environment he enters. In this context, the song operates not merely as a musical accompaniment to the narrative but as a cultural text that articulates ecofeminist resistance to anthropocentrism and colonialism, portraying the colonizer as an “outsider” who is physically present yet ethically and emotionally disconnected from the ecosystem he seeks to claim.

Throughout the history of colonialism, the relationship between humans and nature has never been neutral (Layden et al., 2025). Territorial conquest, resource extraction, and the marginalization of Indigenous peoples have consistently been accompanied by specific ways of perceiving the Earth and non-human life (Ezenwa, Ezeji, & Iheanacho, 2021).

This worldview continues to be reproduced through various cultural texts, including animated films and popular song lyrics that circulate widely within the global entertainment industry. In Disney's *Pocahontas* (1995), particularly through the soundtrack "Colors of the Wind," this intersection of colonialism, nature, and a woman's voice emerges as a crucial site for critical examination. Although presented in a seemingly simple form, the song operates as a densely ideological cultural text that stages the encounter between colonial logic and Indigenous ecological consciousness.

Like mass media more broadly, Disney productions are never ideologically neutral (Garlen & Sandlin, 2016). Media texts possess the power to shape modes of thinking, reinforce social norms, and reproduce structures of power through representations constructed consciously or unconsciously (Bennis & Ghourdou, 2024). Within a colonial context, such representations extend beyond human-to-human relations to encompass human–nature relations as well. *Colors of the Wind* explicitly contrasts two competing worldviews: the Indigenous perspective, which regards nature as an interconnected living space, and the colonial perspective, which conceptualizes nature as an object available for domination and exploitation.

From an ecofeminist perspective, these phenomena emerge from specific patterns of thought and value systems that are deeply embedded in modern Western civilization. Karen J. Warren's concept of the logic of domination, as discussed by Boylan (2022), provides a critical framework for understanding how patriarchy, colonialism, and environmental exploitation function through hierarchical binary structures. Within this mode of thinking, the world is organized into unequal oppositional pairs, such as humans over nature, colonizers over Indigenous peoples, and masculinity over femininity. These binaries assign unequal moral value, thereby granting ethical legitimacy to the domination, control, and exploitation of those positioned as subordinate.

The transformation of perceptions of nature emerges as a direct consequence of this logic of domination (Mrozowski, 1999). As articulated by Carolyn Merchant and interpreted by Chunhua and Ziyang (2018), prior to the era of colonialism and the modern scientific revolution, nature was commonly understood as a Living Mother—a living entity endowed with agency and intrinsic value and engaged in reciprocal relationships with humans. However, colonialism and modern science radically displaced this paradigm. Nature came to be reconceptualized as a Dead Machine: inert, passive, and legitimately exploitable for economic gain and imperial expansion. Within the colonial context, this instrumental view of nature operated in parallel with an instrumental perception of colonized territories and the Indigenous populations inhabiting them.

According to Plumwood (1993), the dominant subject—in this case, the colonizer—constructs his identity as the embodiment of rationality, progress, and civilization while simultaneously positioning himself as ontologically separate from nature. Within this framework, nature is reduced to a passive backdrop deemed irrelevant to human existence. This separation produces a condition of ecological alienation, whereby the colonizer no longer perceives himself as part of the local ecosystem but rather as an external authority that arrives to organize, classify, name, and control it. At this point, the colonizer may be understood as an "outsider" on multiple levels: culturally, ecologically, and ethically.

This alienation is further intensified through mechanisms of epistemological dualism and practices of othering, as theorized by de Beauvoir, Borde, and Malovany-Chevallier (2010) and Plumwood (1993). To dominate nature and colonized societies, the colonizer must first construct them as the Other—entities perceived as different, inferior, and not fully human. Through this process, both nature and Indigenous peoples are stripped of relational subjectivity and reduced to objects or resources. Such practices of othering systematically erase empathy by denying any shared existential ground between the colonizer and the colonized. By severing these affective and moral connections, the colonizer becomes physically present within a territory while remaining emotionally and ethically detached from the surrounding environment and its life forms. This condition legitimizes the interpretation of the colonizer as an "alien," a figure fundamentally incapable of recognizing or experiencing ecological interconnectedness.

To interrogate and critique this dominant ideology, the present study positions popular cultural texts as a critical site of analysis through ecofeminist literary criticism (Glottfelty & Fromm, 1996). Literary and popular cultural works are understood as ideological spaces in which values, critiques, and forms of resistance are negotiated. Ecofeminist literary criticism enables an examination of how relationships among humans, nature, and power are symbolically and metaphorically represented within cultural texts. In this context, the lyrics of *Colors of the Wind* are situated as a form

of ecological advocacy that challenges colonial and anthropocentric worldviews while simultaneously offering an alternative vision of human–nature relations.

The ethics of care described by Larrabee (2016) emphasize relational responsibility, empathy, and attentiveness as counterpoints to rights-based and property-oriented ethics that tend to legitimize exploitation. This perspective is integrated with the arguments of Mies and Shiva (2001), who assert that human survival is possible only when humans recognize their interconnectedness within a shared web of life. From a subsistence perspective, humans are not positioned as masters of nature but as integral parts of ecosystems that must be sustained through coexistence and balance. This framework is further strengthened by Gaard's (1997) concept of erotophobia, understood as a fear of nature's wildness, fluidity, and unpredictability. Together, these theoretical foundations illuminate why colonial subjects fail to establish intimate and ethical relationships with nature and provide a basis for reading *Colors of the Wind* as an ecofeminist critique of colonial subjects who are ecologically and culturally alienated.

Previous studies on Disney's *Pocahontas* (1995) have largely framed the film as a cultural text deeply embedded in ecological, colonial, and gendered concerns. Jun-fang (2016), for instance, interprets *Pocahontas* as a medium of ecological philosophy that represents Indigenous environmental wisdom and promotes a vision of harmony between humans and nature. In contrast, studies by Ono and Buescher (2001), Dundes (2001), Liu (2022), and Kiyomi (2000) reveal how the narrative of *Pocahontas* remains entangled in the commodification of Indigenous women, the reproduction of gender stereotypes, Orientalism, and Disney's cultural-industry strategies that construct an illusion of racial harmony. However, much of the existing scholarship continues to focus on the film as a visual and narrative text, emphasizing character representation, plot structure, and identity politics. The lyrical dimension of *Pocahontas*—particularly the song *Colors of the Wind* as an autonomous expressive form—has received comparatively little critical attention, despite the central role of music in conveying ideological critique through emotional and affective registers. This gap underscores the need for a focused analysis of *Colors of the Wind* as a cultural text that articulates ecological and anti-colonial critiques through musical, poetic, and metaphorical language.

On the other hand, ecofeminist and ecocritical studies of popular culture have demonstrated that popular texts can function as sites of ecological and feminist advocacy. Philipp (2024) argues that popular music operates as an ecofeminist soundscape that performatively narrates relationships between gender and the environment. Similarly, Nagarajan (2021), Omoera, Ogazie, and Markilolo (2024), and A (2022) show how both Disney and non-Disney animated films serve as pedagogical media for disseminating ecological ethics and critiques of patriarchy. Postcolonial ecocritical studies by Agrawal (2025), Echterling (2017), and Yasin (2024) further reveal that colonialism operates through processes of othering directed at both nature and local communities, producing ecological alienation and severing ethical relationships between humans and their environments. However, despite extensive discussions of the Other, colonial domination, and the ethics of care, relatively few studies explicitly conceptualize the colonizer as an ecologically alienated subject—an “alien.” This study extends previous scholarship and offers new insights into colonialism as a masculine formation marked by ecological and ethical alienation.

This study adopts a fundamentally different position from ecocriticism. While ecocriticism generally centers on representations of human–nature relationships, this research moves beyond ecological description to interrogate the logic of domination that links environmental exploitation with an Indigenous woman's voice. The urgency of ecofeminism in this analysis lies in its exposure of patriarchal–colonial binary structures. Accordingly, the alienation experienced by the colonizer in the lyrics of *Colors of the Wind* is examined as a manifestation of a master identity that systematically devalues entities associated with femininity, intuition, and relationality. Through an ecofeminist framework, this research interrogates the intersections of nature, identity, and power. In doing so, it expands ecofeminist scholarship within popular culture studies and also offers a new perspective on representations of colonialism in media.

METHODS

This study adopts a qualitative approach to examine the cultural meanings embedded in the song “Colors of the Wind,” the main soundtrack of Disney's animated film *Pocahontas* (1995), performed by Judy Kuhn. Guided by ecofeminist literary criticism, the analysis explores the interconnections between colonial ideology, power relations, and human–nature relationships as articulated in the song lyrics. The research subject is the lyrics of “Colors of the Wind,” while

the analytical focus centers on the representation of the colonizer's relationship with nature and Native American Indigenous communities, as mediated through Pocahontas's perspective toward John Smith.

Data were collected through close reading, conducted iteratively to identify key lines, metaphors, and symbolic expressions related to ecological interconnectedness, domination, and alienation. This technique enables the interpretation of both explicit and implicit meanings, particularly in contrasting Indigenous relational worldviews with the anthropocentric and masculine logic of colonialism. Data analysis was performed using a descriptive-analytical method, in which the identified lyrical elements were interpreted within an ecofeminist theoretical framework. This process allows the study to demonstrate how "Colors of the Wind" functions as a text of popular culture that articulates an ideological critique of colonial domination, environmental exploitation, and Indigenous marginalization.

The objective of this study is to reveal how "Colors of the Wind" portrays the colonizer as detached from local ecosystems and Indigenous Native American communities. By integrating Larrabee's (1993) concept of the ethics of care with Mies and Shiva's (2001) notions of interconnectedness and the subsistence perspective, this research emphasizes the importance of relationships grounded in responsibility, care, and relational interdependence. Thus, human survival is possible only when humans cease positioning themselves as alien masters and begin to recognize themselves as part of the same web of life. Overall, this study contends that *Colors of the Wind* is not merely a thematic song within an animated film but an ecofeminist critique of masculine colonial logic. Through a female voice represented as originating from Indigenous Native American culture, the song challenges linear, masculine colonial worldviews and offers an alternative vision of a world that is more just, relational, and emotionally grounded.

RESULTS AND DISCUSSION

"Colors of the Wind" is the principal song in Disney's animated film *Pocahontas* (1995), produced by Walt Disney Feature Animation. Within the film's narrative, the song is performed by Pocahontas and explicitly addressed to John Smith, an English colonizer who embodies a colonial worldview toward land and nature. Accordingly, based on the film's narrative structure, the pronoun "I" in the lyrics reflects Pocahontas's internal focalization as the speaking subject, while "you" refers to John Smith as the addressee. Pocahontas's voice thus represents Indigenous Native American subjectivity positioned as the Other and characterized by an intimate, relational understanding of nature. In contrast, John Smith functions as a symbolic representation of the colonizer.

Clarifying this subject-addressee relationship is crucial, as the lyrics of "Colors of the Wind" operate as Pocahontas's articulated critique of the colonial perspective that separates humans from the natural world. Through this dialogic structure, the song exposes the ideological distance between Indigenous ecological epistemologies and colonial anthropocentrism. The following section therefore examines how the lyrics construct the colonizer as an alienated figure within the local ecosystem, drawing on an ecofeminist interpretive framework.

Constructing the Colonizer as an "Alien"

This section examines how the lyrics of "Colors of the Wind" construct the figure of the colonizer as an alien—an entity that is physically present in a newly occupied land yet ontologically and epistemologically disconnected from the ecosystem it inhabits. Within the song's narrative, a tension emerges between the voice of Pocahontas ("I"), representing an Indigenous woman whose knowledge of nature is relational and feminized, and John Smith ("you"), who embodies a masculine colonizer driven by the desire to conquer the land and forest. From an ecofeminist perspective, this analysis demonstrates that the colonial mentality is not merely a matter of cultural difference but a manifestation of patriarchal domination that seeks to control what is perceived as "wild" and unruly.

The colonizer's alienation is initiated through hierarchical labelling, articulated in the lyric "*You think I'm an ignorant savage.*" From Pocahontas's perspective, the internalization of the term *savage* by John Smith exemplifies Karen J. Warren's logic of domination. By labelling Indigenous peoples as ignorant, the colonizer constructs a binary opposition that places himself at the apex of moral and intellectual hierarchy. This binary framing legitimizes his perceived ethical right to judge, govern, and dominate Indigenous communities. In this sense, the colonizer appears as an "alien" not because of his physical foreignness, but because of his inability to recognize Indigenous spiritual and ecological

intelligence. Instead, he relies on rigid Western masculine standards to interpret a new reality, reinforcing his estrangement from both the land and its people.

The colonizer's ignorance of ecological complexity is further emphasized through the rhetorical question, "*How can there be so much that you don't know?*" This line explicitly positions the colonizer as an alien subject suffering from epistemological blindness. Despite arriving equipped with navigational technologies and modern weaponry, the colonizer remains fundamentally estranged from the organic workings of nature. From an ecofeminist perspective, Pocahontas's voice critiques the masculine arrogance of colonial power, an attitude that equates physical force and technological superiority with absolute knowledge. The colonizer thus appears as a figure incapable of empathy yet convinced of his own epistemic authority, producing a deep rupture between his physical presence on the land and any spiritual or relational understanding of it.

This mentality of alienation is further intensified by the possessive impulse articulated in the lyric, "*You think you own whatever land you land on.*" Here, Pocahontas exposes the colonizer's tendency to transform himself from a guest into a self-appointed master. Within ecofeminist thought, this impulse mirrors patriarchal logics that frame both land and women as property subject to ownership and control. The colonizer functions as an "alien" precisely because he lacks emotional attachment, historical continuity, and ethical responsibility toward the land he occupies. For him, the land appears as an empty space awaiting conquest. This relationship is fundamentally transactional and unidirectional: the colonizer takes, while nature is compelled to give, thereby erasing the possibility of reciprocity between humans and the natural world.

This objectifying worldview reaches its culmination in the lyric, "*The Earth is just a dead thing you can claim.*" The line offers a sharp critique of the colonial shift from understanding the Earth as a living mother to conceiving it as a lifeless machine. By reducing the Earth to a dead thing, the colonizer absolves himself of respect, care, and moral responsibility. As an alien entity, he fails to recognize life in trees, stones, and rivers, perceiving nature merely as raw material for extraction and sale. Such a worldview stands in direct opposition to ecofeminist principles that affirm the intrinsic value of all forms of life. Consequently, the colonizer emerges as a subject operating outside the ecological rhythm of the living world, enabling unchecked exploitation in the name of commodity and control.

The distance between the colonizer and Native American communities is further underscored through Pocahontas's critique of a narrow and exclusionary definition of humanity in the lyric, "*The only people who are people / Are the people who look and think like you.*" Through this line, John Smith is represented as a figure who recognizes humanity only in those who resemble him—white, male, and empowered. This lyric exposes the mechanism of othering, positioning John Smith as a colonial agent who selectively grants human status only to those who mirror his own identity. By restricting the definition of "human" to his in-group, the colonizer gains moral justification to withdraw empathy from "the Others," including Pocahontas as a Native American woman and the natural world surrounding her. Such exclusion produces an existential isolation: the colonizer becomes an "alien" not only to Indigenous peoples but also to the broader world he inhabits, as he refuses to engage with or understand anything beyond his own likeness.

Finally, the colonizer's destructive behavioural pattern is articulated in the lyric, "*If you cut it down, then you'll never know.*" The act of cutting down functions as a metaphor for how masculine domination prioritizes destruction over understanding. The colonizer tends to annihilate what he cannot control. Rather than learning from wild nature and Indigenous communities who have maintained reciprocal relationships with the land across generations, colonial power resorts to physical violence to erase elements of the ecosystem, without regard for Indigenous lifeways rooted in ecological continuity. The phrase "*you'll never know*" serves as a warning: by destroying nature, the colonizer deliberately forecloses the possibility of understanding life itself and of cultivating harmony with Native American communities.

Taken together, these findings demonstrate that *Colors of the Wind* constructs the colonizer as an "alien" because he claims without understanding and destroys without guilt. Through Pocahontas's voice, the song reveals that the colonizer has severed himself from the web of life by elevating power and possession values deeply embedded in colonial masculinity. The colonizer becomes alien not because of geographical origin or transcontinental movement, but because

of his failure to love, respect, and relate ethically to nature and other living beings. This reinforces the argument that the exploitation of land and nature is inseparable from the colonial masculine desire to dominate all forms of life deemed inferior.

The theoretical implications of this first section reposition the concept of alienation within ecofeminist discourse. While alienation has traditionally referred to humans' separation from their products (Mukhopadhyay, 2020), this analysis extends the concept to ecological alienation, wherein the colonizer is rendered an alien or foreign entity because of his existential disconnection from the web of life. The findings demonstrate that ecofeminism offers a crucial lens for integrating critiques of masculine colonialism and anthropocentrism as mutually reinforcing logics of domination. Culturally and pedagogically, this deconstruction of *Colors of the Wind* underscores that popular cultural texts are never neutral. Rather, they function as sites of ideological contestation capable of subtly reproducing mentalities of ownership and practices of othering among audiences. This highlights the urgency of critical media literacy in uncovering the values and ideologies embedded within popular cultural narratives.

Ecofeminist Resistance and Ethics of Care

The previous section examined how the colonizer's identity is constructed as that of an "alien" figure estranged from the natural ecosystem. This section now turns to how the lyrics of *Colors of the Wind* become a manifestation of ecofeminist resistance articulated through Pocahontas's voice. Pocahontas is positioned as an Indigenous Native American woman who embodies feminine intuition and spirituality, standing in opposition to John Smith's masculine, dominant, and colonial logic. Through her role as the speaking subject, she offers an ethics of care as an alternative framework for relating to nature and to Indigenous communities whose existence is threatened by the arrival of colonizers intent on exploiting their land.

The first form of resistance emerges when Pocahontas challenges the colonial worldview that reduces nature to a lifeless commodity for sale. This moment functions as a direct response to the lyric, "*The Earth is just a dead thing you can claim.*" From an ecofeminist perspective, perceiving the Earth as a dead object enables the colonizer to justify domination and destruction without moral accountability—an attitude deeply internalized through masculine values of control and conquest. Pocahontas resists this masculine logic of mastery through the lyric, "*But I know ev'ry rock and tree and creature/Has a life, has a spirit, has a name.*" By naming rocks, trees, and creatures and acknowledging their spirits, Pocahontas affirms that nature is a living subject with intrinsic value rather than an object available for colonial appropriation.

This recognition repositions nature not as the Other devoid of identity, but as an entity entitled to ethical recognition, much like Pocahontas herself, whose identity is inseparable from the community and ecosystem to which she belongs. By asserting that every element of nature possesses spirit and life, Pocahontas directly challenges John Smith's status as an "alien" who fails to perceive the intrinsic value beyond physical objects. If the colonizer becomes alienated because he views nature as inert and exploitable matter, *Colors of the Wind* suggests that genuine interconnectedness begins with recognizing nature as a living subject. Through this ecofeminist articulation, Pocahontas offers an ethics of care grounded in relationality, responsibility, and mutual recognition as a counter-discourse to colonial domination.

Pocahontas's voice in *Colors of the Wind* further articulates resistance by challenging the colonizer's epistemological system that demeans Indigenous knowledge. She reverses the label "*ignorant savage*" imposed upon her and exposes the intellectual arrogance of the colonizer through the rhetorical question, "*How can there be so much that you don't know?*" In this moment, Pocahontas reveals that John Smith is uncivilized, not because of a lack of technology or rationality, but because his heart is blind to the affective and spiritual dimensions of nature. This critique underscores the limits of the colonizer's masculine intelligence, which relies solely on logic, calculation, and physical power, and contrasts it with Pocahontas's spiritual intelligence grounded in empathy, intuition, and relational awareness. Through this interrogative lyric, Pocahontas displaces the colonial narrative that positions the colonizer as the bearer of civilization and reframes him instead as an "alien" figure, an outsider lost within a web of life he refuses to understand because he rejects emotional and intuitive ways of knowing.

The critique continues with Pocahontas's rejection of the colonizer's greed and fixation on monetary valuation. She confronts the colonial tendency to calculate the worth of all beings through economic exchange in the lyric, "*And for*

once, never wonder what they're worth." Here, nature and Indigenous communities are reduced to raw materials whose value is determined by colonial interests. Against this logic, Pocahontas introduces a subsistence perspective that resists private ownership and commodification, most explicitly articulated in the line, *"You think you own whatever land you land on."* This resistance affirms that fulfilment and ethical coexistence do not emerge from accumulation or possession, but from the capacity to recognize and respect nature's existence without the desire to dominate or colonize it.

At the core of the ethics of care offered by Pocahontas is the dissolution of the hierarchical distance between humans and nature through the language of kinship, as expressed in the lyric, "The rainstorm and the river are my brothers / The heron and the otter are my friends." Colonial patriarchy typically constructs a hierarchy in which men occupy the highest position, while women and nature are relegated to subordinate roles (Adugna, 2025). Such a structure can only be dismantled by erasing the ontological divide between culture and nature. Pocahontas accomplishes this by replacing relations of mastery with relations of kinship, transforming the colonial "master-object" paradigm into a familial and reciprocal bond. The colonizer becomes an "alien" precisely because he severs these bonds in pursuit of masculine domination and unilateral ownership.

The culmination of Pocahontas's ecofeminist resistance lies in her proposal of a circular worldview that directly challenges the colonizer's linear and extractive logic—arrive, take, and destroy—which is deeply rooted in masculine notions of progress. This destructive tendency is foregrounded in the warning, *"If you cut it down, then you'll never know,"* which exposes John Smith's failure to engage in dialogue with nature. While the colonizer advances a linear vision of development centered on conquest and extraction, Pocahontas offers the metaphor of the circle of life through the lyric, *"We are all connected to each other / In a circle, in a hoop that never ends."* The circle signifies equality, interdependence, and continuity among all living beings. This awareness of interconnectedness stands as the antithesis of colonial alienation. The colonizer becomes alien not because of geographical origin but because he insists on positioning himself outside the ecological circle and pursuing an illusion of dominance. In contrast, Pocahontas affirms that human existence becomes meaningful only when it is fully embedded within the web of life itself.

The in-depth analysis in this subsection yields several important implications for ecofeminist discourse within popular culture. The findings demonstrate that the colonizer's alienation is not merely a matter of geographical displacement or physical migration but rather a failure of both affect and cognition to understand life and produce ethical knowledge. Conceptualizing the colonizer as an "alien" emerges as a consequence of a master-identity paradigm that rejects relationality with nature and with human communities beyond its own group. *Colors of the Wind* effectively reverses the colonial narrative that labels Native American communities as primitive or alien. Instead, the song reveals that it is not Indigenous peoples who are uncivilized or foreign, but the colonizers themselves, who are unable to comprehend the language of nature, metaphorically articulated as the "colors of the wind."

At the level of representation, Pocahontas's voice in the song offers a model of agency for marginalized groups to resist hegemonic power through an ethics of care, empathy, and relational responsibility. Such representations challenge reductive assumptions and stereotypes imposed upon marginalized identities, which often strip both humans and non-human life of their moral value. This dehumanizing logic ultimately erodes humanity's capacity to genuinely care for the Earth and other living beings. The ethical shift foregrounded in this study—from a paradigm of domination to one of care and stewardship—demonstrates that the message of circularity in *Colors of the Wind* functions as a critical reminder: as long as humanity persists in maintaining a linear logic of domination, it will remain alienated from the planet it inhabits. This alienation forecloses the possibility of forming a truly spiritual, ethical, and sustainable relationship with the Earth.

CONCLUSION

This study concludes that *Colors of the Wind*, a central song in Disney's *Pocahontas* (1995), constitutes a powerful articulation of an ecofeminist critique directed at colonial mentality and logic. Through an ecofeminist lens, the colonizer, represented by John Smith, is constructed as an "alien," an entity experiencing ecological alienation. This "alien" status does not merely refer to John Smith's position as a newcomer to the land inhabited by Pocahontas's community; rather, it emerges from his failure to understand nature because of a worldview fundamentally detached from the web of life. The colonizer arrives carrying the logic of domination, which reduces nature to a lifeless object

and a commodity to be claimed. This worldview produces an unbridgeable distance between the human subject as colonizer and nature as object, rendering the colonizer's presence within the local ecosystem inherently destructive and ontologically disconnected from lived ecological reality.

The findings further demonstrate that the lyrics of *Colors of the Wind* function as a site of resistance through Pocahontas's voice, which advances an ethics of care as an alternative ethical framework. Rather than resisting through violence, the song articulates resistance by naming nature and establishing kinship relations, such as recognizing rivers as "brothers." This ethical stance dismantles hierarchical boundaries between humans and nature, replacing a mindset of domination with one of stewardship and responsibility.

Moreover, *Colors of the Wind* subverts dominant colonial narratives. Whereas colonizers typically position themselves as bearers of progress and civilization, the song exposes them as uncivilized and "savage" because of their inability to comprehend the language of nature. This epistemic blindness toward ecological systems legitimizes their identification as "aliens." By replacing a linear colonial logic of arrival, conquest, and extraction with a circular and relational worldview—the circle or hoop—the song asserts that human existence can be considered ethical and "civilized" only when it acknowledges universal interconnectedness with all forms of life.

Theoretically, these findings reaffirm the relevance of ecofeminism as a critical lens for analyzing popular cultural texts. This study expands the concept of alienation in colonial studies by situating it within an ecological framework, in which humanity's separation from nature constitutes the most fundamental form of alienation. Through *Colors of the Wind*, dominant colonial narratives are dismantled to reveal that Western notions of progress often mask profound moral ignorance under the guise of instrumental power. Ecofeminism thus emerges not merely as an environmental theory but as a cultural critique that integrally connects patriarchy, colonialism, and anthropocentrism.

Finally, this study underscores the importance of critical media literacy for contemporary audiences. *Colors of the Wind* offers a model of agency for marginalized and Indigenous communities to challenge hegemony through narratives grounded in care, empathy, and relational ethics. Pocahontas's representation as an intellectually sovereign speaker disrupts the assumption that Native American communities are alien to civilization. Instead, the song reverses this logic, demonstrating that those who fail to understand the language of nature are the ones truly alienated from the essence of life on Earth.

This research ultimately calls for a paradigmatic shift from an ethic of domination to an ethic of care in humanity's relationship with ecosystems and the natural world. The song's message of circularity serves as a reminder that, as long as humanity persists in maintaining a linear logic of domination and treating nature solely as a capitalist resource, it will remain alienated on its own planet. Failure to reintegrate into the unbroken circle of life risks extinguishing humanity's capacity to inhabit the Earth in a spiritual, ethical, and sustainable manner. Recognizing ecological interconnectedness, therefore, is no longer a poetic ideal but an essential condition for humanity's future existence.

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