

The Journal of Behavioral Science (TJBS)

Qualitative Article

Behavioral Dimensions of Learning and Transmitting Conservation Laws among the Urak Lawoi Community in Southern Thailand: A Qualitative Research

Panuwat Pankaew^{1*}, Abdullah Chelong², and Rewadee Ungpho³

Abstract

Background: The Urak Lawoi ethnic group in Koh Lanta, Thailand, maintains a close bond with nature but faces challenges due to strict conservation laws that conflict with their traditional livelihoods. Limited formal education and communication gaps have led to misunderstandings and difficulties in legal adaptation. While awareness of conservation exists, the community lacks a structured learning process to integrate these laws into their daily practices effectively.

Objective: This study aims to explore the behavioral dimensions of learning, influencing factors, and barriers to adaptation regarding conservation laws among the Urak Lawoi community.

Design and Methodology: This qualitative study employed a hermeneutic phenomenological approach. Fifteen key informants, including community leaders, spokespeople, local wisdom teacher and community members, were selected through purposive sampling. Data was collected via semi-structured interviews, participant observations, and informal conversations. Content analysis and triangulation were used to ensure the credibility of the findings.

Findings: The study reveals that learning among the Urak Lawoi is fundamentally experiential and socially embedded, relying on direct observation, intergenerational transmission, and a cyclical process of daily survival rather than linear instruction. Key influencing factors include strong community leadership and social role modeling. However, significant barriers hinder adaptation, specifically a lack of government resources, limited access to modern technology, and a generational gap in perception.

Conclusion and Implications: The findings suggest that legal compliance cannot rely solely on enforcement but requires a hybrid learning approach that validates traditional wisdom while integrating modern support systems. Sustainable coexistence requires culturally sensitive interventions, improved access to information, and collaborative policies to empower the community and bridge the gap between traditional practices and modern conservation mandates.

Author Affiliation

¹ Faculty of Liberal Arts, Prince of Songkla University, Thailand.

² Research Center for Language, Culture, and Human Development in Lower ASEAN, Faculty of Liberal Arts, Prince of Songkla University, Thailand.

³ Faculty of Fine Arts, Srinakharinwirot University, Thailand.

*Corresponding author e-mail:
panuwat.p@tsu.ac.th
<https://orcid.org/0009-0006-9089-2074>

Article Information

Received: 09.07.25

Revised: 30.07.25

Accepted for Review: 06.08.25

Keywords

Community adaptation, conservation laws, knowledge transmission, learning behavior, Urak Lawoi

The Urak Lawoi people, are an ethnic group to the coastal regions of Koh Lanta district in Krabi province, Thailand, and they have a close bond with natural resources (International Union for Conservation of Nature, 2019). Traditions, beliefs, and rituals reflecting a deep reverence for nature have sustained their way of life across generations (Ratinathi, 2022). However, the social and economic changes in the current era, including the enforcement of natural resource conservation laws, have resulted in communities encountering increasing challenges. The first critical issue is not understanding nature conservation according to Thailand's national park act (2019), nor understanding the specific way-of-life among the Urak Lawoi, who are an ethnic group of sea gypsies, inhabiting the islands and coastal areas as Koh Lanta

in southern Thailand. This has caused conflicts among the agencies related to the community. According to an informal interview with Urak Lawoi in June 2025, the researchers discovered that the sea gypsies are an indigenous ethnic group who traditionally inhabit coastal and the island areas of southern Thailand, including Koh Lanta. Their semi-marine way of life, distinct cultural practices, and customary resource use have occasionally led to conflicts with governmental and administrative agencies responsible for land and marine management. They lack knowledge of the law because most of them have not finished their education degree, and they are also absent from the contacts to the government agencies due to their introverted personality, gathering in their community only, and being afraid of government officers. Due to limited legal awareness, sea gypsies have been arrested for encroaching on national parks. Furthermore, overexploitation, environmental shifts, and tourism expansion are degrading marine resources, threatening their long-term livelihoods (Caust, 2021).

These changes have encouraged some Urak Lawoi to value resource protection and seek legal knowledge to adapt their lifestyles (Baird, 2016). However, a lack of systematic learning and coordination has created a knowledge vacuum in training and information transfer between communities and relevant agencies (Mahapunyo, 2023).

The purpose of this study was to close the gap in research due to a lack of a systematic investigation about the nature conservation law of the Urak Lawoi community in South of Thailand. It explores the learning process, knowledge transfer, and adaptation that are in line with the community's way of life. This research investigates ways to optimize learning and strengthen community knowledge regarding natural resource conservation.

Additionally, the study's findings can serve as a roadmap for creating a curriculum and encouraging community participation to improve collaboration between the Urak Lawoi and pertinent organizations for the sustainable preservation of natural resources. Therefore, this research proposed a new approach to create the balance between conservation and the way of life of the Urak Lawoi people in Koh Lanta District, Krabi Province, Thailand, by emphasizing the appropriate knowledge promotion, comprehension, and learning process. This is for the Urak Lawoi to be able to maintain their traditional way of life in harmony with nature and modern conservation laws, which will be an important foundation for creating long-term sustainability for the community.

Literature Review

This section begins with the theoretical background, learning theory, humanistic learning theory and ethnic theory followed by the research concept and finally the research objective.

Theoretical Background

This study explores the behavioral dimensions of learning and transmitting conservation laws among the Urak Lawoi people. To understand the learning processes, influencing factors, and barriers within this community, three key theoretical frameworks were employed: learning theory, humanistic learning theory, and ethnic theory (Gardner, 2011). These theories provide a comprehensive foundation for analyzing how knowledge about conservation is acquired, shared, and adapted within the cultural context of the ethnic group of Urak Lawoi.

Learning Theory

Learning is a fundamental process that leads to changes in behavior and cognition through new experiences, such as hands-on practice, reading, or the use of technology (Mahapunyo, 2023). Adult learners typically build knowledge based on their personal experiences, while children often learn through formal instruction and interaction with teachers. (Piriyaphokanont & Pintong, 2023) This theory supports the understanding of how the Urak Lawoi community members acquire and internalize conservation knowledge through experiential and social learning. It also underscores the importance of continuous learning and adaptation, which are crucial for improving individual and community quality of life as well as promoting sustainable environmental practices. The aforementioned theory is connected to the Urak

Lawoi through the concept that learning arises from their experience and hands-on practice in daily life, rather than from textbooks in a classroom. Knowledge is generated through work and problem-solving encountered in real-life situations. Among Urak Lawoi communities, learning is intrinsically woven into daily life. Knowledge is cultivated through routine engagement in fishing, environmental observation, and practical activities, rather than through formal instruction.

Humanistic Learning Theory

The humanistic learning theory developed emphasizes the importance of creating a warm, supportive, and secure learning environment that fosters personal growth and the realization of full potential (Maslow, 1943). This theory is particularly relevant to indigenous and ethnic groups such as the Urak Lawoi, whose lifestyles are deeply intertwined with nature (Kongkaew, 2024). The theory highlights the need for external support and a conducive atmosphere within the community to promote knowledge growth and effective conservation efforts. It also guides the development of culturally sensitive learning approaches that encourage motivation, empowerment, and active participation in environmental stewardship (Sithamnuay, 2021).

This theoretical framework resonates with the lived realities of Urak Lawoi, communities, particularly in their emphasis on cultivating a warm, safe, and mutually supportive environment. Such conditions are essential for unlocking individuals' intrinsic potential. Among the Urak Lawoi, learning is most effectively fostered when individuals experience a sense of belonging, maintain strong interpersonal relationships, and engage in collective efforts toward shared goals. For example, community-led coastal restoration initiatives are not merely acts of labor; they constitute participatory learning processes grounded in reciprocity and communal resilience. These practices reflect a holistic epistemology in which knowledge is co-constructed through everyday interactions, environmental stewardship, and intergenerational collaboration.

Ethnic Theory

Ethnic theory posits that ethnic groups maintain a strong bond with the natural environment, relying on sustainable use of natural resources to support their livelihoods and cultural identity (Ratinathi, 2022). This perspective underscores the significance of integrating traditional ecological knowledge and cultural values into conservation education (Kowtrakul, 2011). For the Urak Lawoi, this integration is vital to preserve their way of life while ensuring sustainable resource management. The theory helps explain how cultural identity shapes perceptions, acceptance, and transmission of conservation laws within the community.

This conceptual framework is reflected in the lifeways of the Urak Lawoi, whose deep-rooted connection to nature and the environment forms the foundation of their cultural identity. Their subsistence practices are not merely resource utilization. However, it constitutes an intergenerational transmission of ecological consciousness, embedded in traditions and belief systems. Such practices—like seasonal fishing rituals and customary norms that prevent environmental degradation—serve as mechanisms for sustaining biodiversity and reinforcing communal values. Knowledge is passed down through generations to ensure that future members of the community retain access to natural resources essential for survival (Sanguawongthong, 2009). This process exemplifies an indigenous epistemology in which conservation is inseparable from cultural continuity and collective responsibility (Baird, 2016).

Integrating these three theoretical perspectives enables a holistic understanding of how the Urak Lawoi community learns about and practices conservation laws. Learning theory elucidates the processes of knowledge acquisition and behavioral change; humanistic learning theory emphasizes the environmental and motivational context necessary for effective learning; and ethnic theory situates these processes within the cultural and ecological realities of the community. Together, these frameworks inform strategies to support sustainable conservation knowledge transmission that respects and preserves the unique cultural heritage of the Urak Lawoi.

Conceptual Framework of Behavioral Dimensions in Conservation

The conceptual foundation of this study focuses on the behavioral dimensions of learning, influencing factors, and adaptation barriers regarding natural resource conservation laws within the Urak Lawoi community. At the core of this framework is the understanding of behavioral learning as a transformative process where cognitive shifts and physical actions are modified through new experiences, observation, and practice (Schunk, 2012). For the Urak Lawoi, these behavioral modifications are often distinguished by generational learning pathways; while adults primarily reshape their conservation behaviors through direct experiential engagement and real-life problem solving, children typically internalize these norms through formal instruction and social interaction (Knowles et al., 2020). This conceptual lens allows for an analysis of how legal knowledge is translated into practical, everyday environmental stewardship.

Furthermore, the behavioral dimensions of conservation are deeply embedded in the cultural context and ethnic identity of the community. Because behaviors and learning processes are fundamentally shaped by the values and traditions of an ethnic group (Purwaningsih & Ridha, 2024), the Urak Lawoi's historical relationship with the sea dictates how they perceive and practice modern conservation mandates. This indigenous perspective suggests that environmental conservation knowledge is a hybrid construct, where formal legislation must intersect with local wisdom to achieve sustainable resource management (Berkes, 2012; Turner et al., 2003). Consequently, the transition to sustainable behavior is not merely a cognitive task but a cultural negotiation where ethnic identity serves as a primary filter for accepting new legal regulations.

In conclusion, the integration of these theoretical frameworks provides a direct pathway to addressing the study's research objectives. The focus on behavioral and generational learning (Schunk, 2012; Knowles et al., 2020) provides the necessary tools to answer the first research question regarding how the Urak Lawoi in community learn and transmit conservation knowledge. Simultaneously, the humanistic perspective on supportive environments (Maslow, 1943; Rogers, 1969) offers a lens to identify the key influencing factors identified in the second research question. Finally, the concepts of transformative learning and structural friction (Mezirow, 1997; Tuckman, 2012) serve as the foundation for investigating the third research question concerning the barriers that impede the community's adaptation to modern legal frameworks. This conceptual synthesis ensures that the study moves beyond descriptive analysis, offering a theoretically grounded understanding of the sociocultural dynamics involved in the legal adaptation of the Urak Lawoi people.

Research Questions

This study aimed to explore learning behaviors, influencing factors, and barriers to adaptation regarding conservation laws among the Urak Lawoi. To achieve this aim, the study addressed three research questions:

1. How does the Urak Lawoi community learn about and transmit knowledge regarding natural resource conservation laws?
2. What are the key factors influencing the learning and transmission of these laws within the community?
3. What barriers prevent the Urak Lawoi people from adapting to or complying with modern conservation laws?

Method

Design

This qualitative study focuses on interpreting and understanding individuals who lived experiences within their cultural and social contexts. This approach allows for an in-depth exploration of how the Urak Lawoi community learns about and applies nature conservation laws in their daily lives. On 1 - 20 June 2025, data were collected through in-depth interviews, informal conversations, and participant observations to capture rich, contextualized understandings in Tobalui, Koh Lanta District, Krabi Province.

Participants

The study involved 15 participants purposively selected from the Tobalui Urak Lawoi community. Selection was guided by specific criteria as follows: participants must have resided in the community for at least five years to ensure a deep understanding of local dynamics, and they must have consented to audio recording for data accuracy. The key informants comprised two community leaders, two community spokespersons, one local wisdom teacher, and ten community members recognized for their extensive knowledge of the community's history and traditional practices.

Rather than relying on a predefined numerical threshold to determine the final sample size, this study adhered to the principle of data saturation. Data collection continued until the point where no new themes, categories, or substantive insights emerged from additional interviews. At this stage, the collected data provided a comprehensive and redundant understanding of the learning behaviors and adaptation barriers within the community, signifying that further data collection would not yield significant new information.

Sampling Procedures

Purposive sampling was used to identify and recruit participants who possessed relevant knowledge and experience regarding the community's conservation practices and legal awareness. Selection focuses on individuals actively engaged or respected within the community to ensure rich and relevant data. Recruitment was facilitated through community contacts and recommendations from local leaders to gain trust and cooperation.

Inclusion and Exclusion Criteria

Inclusion criteria consist of adults aged 18 years and older who are recognized as knowledgeable or influential regarding natural resource use and conservation in the community. Participants had to have direct experience or historical knowledge of the community's interaction with conservation laws and be willing and able to communicate and share their experiences during interviews. Exclusion criteria included individuals without significant knowledge or involvement in conservation activities or community leadership and those unwilling or unable to participate fully in the interview process.

Interview Questions

The primary data collection tool was a semi-structured interview guide developed based on the study's conceptual framework, incorporating learning theory, humanistic learning theory, and ethnic theory (Gardner, 2011; Maslow, 1943). The question development process began with a comprehensive literature review to identify key themes, followed by a review for content validity by experts to ensure alignment with the research objectives (Tuckman, 2012). The interview guide consisted of three main parts corresponding to understanding the behavioral dimensions of the Urak Lawoi community:

1. Learning behaviors: Questions were focused on the methods and channels of knowledge acquisition, for example, "How do you learn about nature conservation laws in your daily life?" and "Who plays the most important role in teaching you about these rules?"
2. Influencing factors: Questions explored social and cultural drivers, for example, "How do traditional beliefs or community leaders influence your decision to follow conservation laws?" (Bandura, 1977).
3. Barriers to adaptation: Questions addressed obstacles in compliance, for example, "What are the main difficulties or challenges you face in adapting your traditional livelihood to modern conservation regulations?"

In addition to formal interviews, informal conversations and participant observations were conducted to triangulate data and capture the context of these behaviors in real-world settings (Barth, 1969).

Data Analysis

Data was collected through scheduled interviews conducted in a conversational and relaxed manner to build rapport and encourage openness. Interviews were audio-recorded with consent and supplemented by field notes from informal conversations and participant observation during community activities related to natural resource use. This multi-method approach helped ensure comprehensive data capturing the complexity of learning and adaptation processes (Tuckman, 2012).

Data was analyzed using content analysis techniques. Transcripts and field notes were systematically reviewed, coded, and categorized according to emerging themes related to learning behaviors, influencing factors, and barriers to conservation law adoption. The analysis was iterative, with continuous reflection on the data to interpret the deeper meanings behind participants' experiences in line with hermeneutic phenomenology principles. Themes were triangulated with observational data and document reviews to ensure accuracy and richness.

Data Rigor

To ensure trustworthiness and credibility of the findings, the study adopted the criteria for trustworthiness outlined by Lincoln and Guba (1985). Methodological triangulation was used to compare data from multiple sources, including in-depth interviews, observations, and documents (Denzin, 1978). Additionally, member checking was conducted by inviting participants to review interview summaries to validate interpretations. An audit trail was maintained to ensure transparency, and the researcher engaged in reflexivity to minimize bias throughout the process.

Results

This section presents the findings of the study, organized to directly answer the three research questions proposed. The findings are divided into two main parts: the demographic characteristics of participants and the emerging themes derived from the qualitative data.

Demographic Data

The study involved a total of 15 participants who were purposively pursued from the Urak Lawoi community in Tobalui, Koh Lanta District. These key informants were chosen based on their roles, cultural expertise, and familiarity with the community's interaction with natural resources and conservation laws. The aim was to understand their learning behaviors, influencing factors, and the barriers they face in adapting to conservation regulations. Semi-structured interviews served as the primary data collection tool, allowing for in-depth exploration of participant perspectives. The demographic characteristics of the participants and the research tools used are summarized in Table 1.

Table 1
Demographic Characteristics of the Participants

Participant Group	Role / Description	n	Data collection method
Community leaders	Individuals hold formal or informal leadership roles guiding community decisions.	2	Semi-structured interview
Community spokespeople	Representatives acting as intermediaries between the community and external organizations.	2	Semi-structured interview
Local wisdom teacher	Recognized expert in traditional ecological knowledge and cultural heritage.	1	Semi-structured interview
Community members	Individuals with direct experience in traditional conservation practices and daily resource use.	10	Focus group discussion & interview
Total		15	

Emerging Themes

According to the qualitative analysis, three major themes that directly correspond to the three research questions established in this study. These themes provide a comprehensive understanding of the behavioral dimensions regarding how the Urak Lawoi community interacts with and adapts to natural resource conservation laws.

Theme 1: Learning characteristics. This addresses the first research question by explaining how the community acquires knowledge about conservation regulations through their traditional way of life.

Theme 2: Learning-promoting factors. These explore the second research question by identifying the key social and cultural drivers that facilitate the transmission of legal and ecological knowledge.

Theme 3: Obstacles to learning. These address the third research question by highlighting the barriers preventing effective adaptation to modern conservation laws.

The researcher reports the findings by using pseudonyms for the participants such as P1, P2, and so on.

Theme 1: Learning Characteristics of Urak Lawoi People in Tobalui Community

The learning characteristics of the Urak Lawoi people in the Tobalui community differ from formal education systems. Their acquisition of knowledge regarding natural resource conservation and related regulations is integrated directly into their daily livelihoods. Specifically, the behavioral dimensions of their learning consist of the following subthemes:

Subtheme 1.1: Learning from Real Experiences. The majority of the Urak Lawoi people's learning comes from real-world experiences, such as fishing, shellfish collection, mangrove planting, and the use of natural resources in daily life. Community members learn via practical experiences, such as catching fish, growing forests, and protecting regions. This form of learning not only teaches kids how to use natural resources properly, but it also raises awareness about the significance of protecting those resources. This is reflected in the interview, when P1 (member of the Tobalui community) states, "...fishing or reforestation is something we learn every day. It's not simply about studying from books; we must follow nature in real life". Similarly, P2 (member of the Tobalui community) states, "...the fishing that we do every day is not just fishing but learning while caring for nature". When we realize that there is something we can do to improve the resources, we will do it. The Urak Lawoi people's learning is therefore a process related to practical action to maintain the community's natural resource balance and the ability to use them sustainably in the future.

Subtheme 1.2: Learning from Knowledge Exchange. In the Tobalui village, the Urak Lawoi are kind and adaptable. They like collaborating and are kind. The Urak Lawoi frequently recognize the value of supporting one another in the community. One crucial element that enables learning to occur without the need for formal instruction is communal teamwork. Working together to protect natural resources is a firsthand experience that may teach people how-to live in harmony with one another. As shown in the interview, P3 (community leader) stated, "...we frequently collaborate as we all learn when we support one another. As a village, we learn by assisting in the restoration of the devastated shoreline" The Urak Lawoi view collaboration as a vital educational tool that not only contributes to the preservation of natural resources but also fosters strong community bonds, which frequently arise from participating in a variety of activities together. Talking and sharing experiences between the younger and older generations is a crucial component of learning promotion because knowledge exchange from people with experience in the community is just as essential as participating in activities.

Subtheme 1.3: Learning by Listening and Observing. The Urak Lawoi people frequently gain more knowledge via listening and seeing. By seeing how members of the community behave, elders in the community frequently impart knowledge on how to manage natural resources responsibly and appropriately. One crucial skill that helps community members comprehend how to coexist peacefully with nature is hearing the counsel of seasoned individuals. According to P4 (Tobalui community member), "There are moments when we must watch and pay attention to what the elders have to say. They will

instruct us without explicitly informing us. However, it is discovering that we can comprehend ourselves by looking at ourselves”.

Subtheme 1.4: Learning from Customs and Traditional Lifestyles. In the Urak Lawoi group, education is closely linked to customs and traditional ways of life. By keeping this practice alive, we can raise awareness about sustainable resource usage, including seasonal fishing, reducing resource depletion, educating kids to appreciate nature, and leading an eco-friendly lifestyle. This was apparent throughout the interview: P5 (a member of the Tobaliu community) stated, “...learning in our community is not just in the classroom, but also learning from daily work, where we teach our children to take care of natural resources”.

Subtheme 1.5: Learning via Group Social Activities. In the Tobaliu community, learning also occurs through taking part in a variety of social activities, such planning agricultural events, fishing at the right times, and cooperating to preserve mangrove forests. In addition to promoting education, this partnership fosters community cohesion and raises awareness of the value of protecting natural resources. According to P2 (member of the Tobaliu community), “...working together is the best learning because we work together to do various activities in the community and learn the correct way to use natural resources”.

Subtheme 1.6: Lifelong Learning. For the Urak Lawoi in the Tobaliu community, lifelong learning is crucial because it allows the group to maintain and improve its cultural knowledge and adaptability to external changes. In the Tobaliu community, the Urak Lawoi frequently learn from the experiences that are passed down from one generation to the next. These experiences include fishing, weaving, manufacturing traditional tools, and maintaining customs that represent the group's way of life from the past to the present. Furthermore, the Urak Lawoi benefit much from learning from their connections with other groups as it enables them to grow and adapt to changing social norms. This is supported by P4 (member of the Tobaliu village):

Our community is strong in preserving traditions and local ways of life. We never lose sight of the vital and precious things in life, even in this day of tremendous technological advancement and change. In order to build each community, we want other communities to recognize the value of maintaining their unique identities and to value mutual learning.

Since the Urak Lawoi people are not just mired in the past but are also receptive to new ideas that might advance and improve their culture and way of life, this interview may highlight the value of lifelong learning in the Tobaliu community.

The findings of this research show that the Urak Lawoi community acquires knowledge through direct experience and collective engagement in activities. This learning process reflects experiential learning theories that emphasize hands-on practice, as well as ethnographic perspectives that integrate knowledge with the surrounding environment. Accordingly, development initiatives should prioritize the organization of experiential learning platforms in real-world settings, for instance, conducting boundary walks within national park areas in collaboration with officials and community elders to explain legal provisions in a tangible and contextually relevant manner.

Theme 2: Learning-Promoting Factors in the Urak Lawoi, Tobaliu Community

According to the study, several key factors within the Tobalui community encourage and facilitate the learning process regarding natural resource preservation and compliance with conservation laws. These factors are crucial for sustaining long-term knowledge transmission within the community.

Subtheme 2.1: Supports from Community Leader. Community leaders have an important role in promoting education, especially in natural resource protection. When community leaders can communicate conservation laws and the need of safeguarding natural resources to their people, learning transcends the realm of theory. A Tobaliu village leader, P6 stated: “community leaders help us all understand the importance of natural resource conservation, remarked the person being interviewed. Talking alone is insufficient; it may also be utilized to work together with community members”.

Subtheme 2.2: Use of Social Activities. Community learning may be fostered via social activities including cooperative fishing, mangrove planting, and cooperative natural resource restoration. In addition to producing new information, the Urak Lawoi people of Tobaliu collaborate to conserve resources, which improves community ties and collaboration. As said in the interviewee by P7 (member of the Tobaliu community), “we can learn from each other when we collaborate on these activities. In addition to working, planting mangroves and fishing teach us how to preserve the environment the way we have always done”.

Subtheme 2.3: Connection to Traditional Ways of life. The Urak Lawoi people's traditional way of life and education are intertwined in the Tobaliu community. The Urak Lawoi people's sustainable way of life includes conserving natural resources, which includes using them responsibly and respecting the environment. Examples of this include planting mangroves, fishing in the right season, and not destroying natural resources in conservation areas. This form of learning results from refining and expanding the customs upheld in the old way of life so that they may be used in the modern day. As P8 (member of the Tobaliu community) stated, “Our lives include the preservation of natural resources. Traditional resource usage methods have never been abandoned; instead, they have been modified to better suit the circumstances at hand”. Learning in the Urak Lawoi community in Tobalit is raised by the team effort that involves a few important elements, such as linkages to traditional ways of life, the utilization of social events to share information, and support from community leaders. In addition to fostering collaboration within the community to preserve the environment they coexist in. This education helps the community to develop and sustainably manage its natural resources.

Additionally, the study indicates that the learning processes within the Chao Lay (Urak Lawoi) community are significantly supported by community leadership and socially embedded activities. This finding aligns with principles of humanistic learning theory, which emphasize the cultivation of a warm and psychologically safe environment conducive to unlocking individual potential. From a developmental perspective, a strategic approach involves strengthening the capacity of community leaders through initiatives such as the legal communication leadership program of the researcher for the Urak Lawoi community. This program equips local leaders with legal knowledge and communicative tools, enabling them to organically integrate legal awareness into various community-based activities and practices.

Theme 3: Obstacles for Learning in Urak Lawoi People in Tobaliu Community

Although there are supporting factors, the Tobaliu community faces significant barriers that hinder the effective learning of modern conservation laws. These obstacles affect the community's ability to adapt their traditional practices to comply with legal regulations as follows:

Subtheme 3.1: Lack of Resources and Supports from Public Sector. The community has collaborated on social activities and learned from real-world experiences, but it has been unable to expand learning or develop projects on a larger scale due to a lack of resources, including funding for education and conservation projects, as well as a lack of support from government organizations. According to P9 (member of the Tobaliu community), “We want to do a larger natural resource conservation project, but lack of budget and support from government agencies sometimes have to stop the projects we want to do”.

Subtheme 3.2: Lack of Information and Technology Accessibilities. Lack of access to current knowledge or technology that may be applied to the conservation of natural resources is one of the main challenges. For instance, the community currently lacks knowledge in this area, learning about sustainable resource usage, or employing technology to track natural resources. According to P10 (a member of the Tobaliu community), “We don't have the technology or tools necessary to manage natural resources more effectively. We will most likely learn more effectively if there are new knowledge or resources available”.

Subtheme 3.3: Different Understanding Between Old and Younger Generations. There may be instances where the younger and older generations in the community have different perspectives, particularly when it comes to protecting natural resources. While the younger generation may seek out more contemporary and effective approaches, the older generation tends to adhere to long-standing, established practices. Conflict and an unwillingness to work together to save resources or learn might result from this.

According to P11 (a member of the Tobaliu community), “The older generation prefers to use traditional methods, but the younger generation sometimes wants us to use technology. There is a misunderstanding when we don't follow the wishes of the younger generation”.

Subtheme 3.4: Difficulty in Adapting to Changes. It might be difficult to learn and conserve natural resources in the community as things change in the modern world, especially when it comes to adopting new techniques or bringing in outside information to advance the community. Clinging to old ways of living and being unaware of societal changes might be the cause of this. As stated by P12 (member of the Tobaliu community), “We find it difficult to adjust to change because some things go against the traditional way of life we have always led”. . Thus, there are moments when we lack the courage to experiment or adapt.

Subtheme 3.5: Lack of Participation from Some Members in Community. Notwithstanding the community's efforts to encourage education, some community members still lack access to education or may not recognize the value of protecting natural resources, which hinders a whole learning process. According to P13 (member of the Tobaliu community), “Some members of the community do not place any value on conservation or education about this. They still do not think it's such essential”.

In summary, barriers to learning in the Urak Lawoi community in Toabaliu include a lack of government resources and support, a lack of access to information and technology, differing understandings between older and younger generations, difficulty adapting to change, and a lack of participation from some community groups.

Discussion and Conclusion

Discussion of Main Results

The findings provide a comprehensive understanding of the behavioral dimensions involved in transmitting conservation laws among the Urak Lawoi people. The findings are discussed according to the three research questions, in the sequence of: learning behaviors, influencing factors, and barriers to adaptation.

Learning behaviors can be developed through the experiential and cyclical process. The study reveals that the Urak Lawoi acquire conservation knowledge primarily through a cyclical process embedded in daily survival, rather than through linear instruction. This reflects the learning theory outlined in the literature, specifically aligning with Kolb's (1984) experiential learning model. The Urak Lawoi navigate this cycle through concrete experience (fishing), reflective observation (noticing ecosystem changes), and active experimentation (adjusting practices). This finding supports Mahapunyo (2023), who emphasizes that deep understanding in adult learners arises from direct experience. However, critical cognitive dissonance exists because legal conservation frameworks are often abstract and text based. This discrepancy explains why awareness of nature does not immediately translate to compliance with statutory laws; the laws are not yet integrated into their experiential cycle.

Influencing factors emerge through social interaction and role models. The transmission of conservation knowledge in the Tobalui community is fundamentally social and hierarchical. This relies heavily on Vygotsky's (1978) sociocultural concepts, where community leaders act as more knowledgeable, providing scaffolding for younger generations. Furthermore, consistent with the humanistic learning theory (Maslow, 1943), the community creates a supportive, safe environment that fosters motivation. The success of conservation efforts is also influenced by observational learning (Bandura, 1977), where members mimic the behaviors of respected leaders. This aligns with recent research by Boontun and Pothitan (2024), who found that strong self-management models led by community leaders are essential for successful sustainable community forest management. Thus, the most potent factor influencing legal adaptation is the visible adherence to the law by influential figures who serve as behavioral models.

The main barriers to adaptation are identified as structural issues and generational gaps. Despite strong social capital, the community faces significant barriers. Structurally, the lack of external resources creates a competency gap, preventing effective engagement in new conservation practices. Internally, a generational disconnect poses a significant barrier. The younger generation's preference for modern technology conflicts with the older generation's traditional methods. This reflects a disruption in the cultural transmission described in the ethnic theory (Gardner, 2011), where cultural identity shapes resource use. This is aligned with the findings by Purwaningsih and Ridha (2024), who note that traditional cultural values are increasingly challenged by modern shifts. When the method of transmission differs between generations, the message of conservation risks being lost, requiring a hybridization of learning methods to bridge this gap.

Limitations

This study was conducted within a specific cultural and geographical context, focusing solely on the Urak Lawoi community in Toba Lui, Koh Lanta District. Thus, the findings may not be generalizable to other sea nomad groups or ethnic communities with different socio-cultural dynamics. The use of purposive sampling, while effective for obtaining in-depth insights, may also introduce selection bias, as participants were chosen based on their perceived knowledge and involvement in conservation practices. Additionally, the study relied primarily on qualitative methods, including semi-structured interviews and field observations, which may be subject to researcher interpretation and informant subjectivity. Language barriers and cultural nuances may also have influenced the accuracy or depth of data interpretation, particularly when translating local terms and concepts into academic language. Lastly, due to the sensitive nature of legal and governmental interactions, some participants may have withheld certain opinions or experiences out of fear or mistrust, potentially limiting the completeness of the data.

Implications for Behavioral Science

This study provides valuable insights into how culturally relevant e-learning content can influence youth behavior, particularly in the context of cross-cultural understanding and the reduction of youth violence. From a behavioral science perspective, the integration of local cultural elements and active community involvement creates a learning environment that fosters cultural pride and encourages behaviors aligned with peaceful coexistence and mutual respect. The study's findings are consistent with key behavioral theories, such as sociocultural theory by Vygotsky (1978), and the social learning theory of Bandura (1977), which highlights the role of modeling and reinforcement in behavior change. By utilizing digital technology as a medium for learning, this study suggests that e-learning platforms can be powerful tools for behavior modification, particularly in promoting positive social behaviors among youth. Digital content's interactivity enables real time engagement and feedback, reinforcing desired behaviors and modeling social interactions.

This study underscores the need for culturally tailored behavioral interventions, as universal approaches often fail in multicultural contexts. Integrating local norms and values helps educational programs connect meaningfully with participants, promoting lasting behavioral change. This approach aligns with the behavioral science principle that behavior is context dependent, and interventions must be adapted to the unique cultural and social contexts of the target population (Janyam, 2024). The findings of this study contribute to the growing body of research on behavioral change in youth, particularly in multicultural contexts. Future studies could explore the long-term effects of such interventions, as well as the potential for scaling these strategies across different cultural settings.

Conclusion

In conclusion, the study finds that the behavioral dimensions of learning conservation laws among the Urak Lawoi are fundamentally experiential and socially embedded. Specifically, this process relies on direct observation of elders during maritime activities and the collective management of communal mangrove plots. On the other hand, strong cultural bonds facilitate this, the community faces significant,

tangible barriers: the lack of legal representation in policymaking, the absence of translated legal materials into the local dialect, and the economic pressure that forces the younger generation to prioritize immediate income over long-term traditional learning. Consequently, transmission of laws requires a hybrid approach that formally recognizes traditional approach as a valid precursor to state law. This ensures that legal compliance evolves into an internalized cultural practice, fostering sustainable coexistence between the Urak Lawoi lifestyle and modern conservation mandates.

Declarations

AI Usage Statement: The authors declare that no generative AI or AI-assisted technologies were used in the writing, editing, data analysis, or preparation of this manuscript.

Conflicts of Interest: The authors declare no conflicts of interest.

Funding: This study was supported by a grant for doctoral graduate students from the Research Center for Language, Culture, and Human Development in Lower ASEAN (RC-LCHD), Faculty of Liberal Arts, Prince of Songkla University, Fiscal Year 2023.

Conflicts of Interest: The authors declare no conflicts of interest.

Ethical Approval Statement: The research was approved by Thaksin University Ethnics Committee on Human Research (REC No.0352, May 19,2025)

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