

Integrative Model of Tourism-Education Synergy for Sustainable Rural Development: A Systematic Literature Review

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ABSTRACT

This study aims to analyze the contribution of tourism to educational development within the context of sustainable development by reviewing and synthesizing previous research through a Systematic Literature Review (SLR) approach. Twenty selected articles published between 2020 and 2025 were analyzed using the PRISMA framework. Data were collected through a systematic selection process based on inclusion criteria focusing on tourism, education, and sustainable rural development. The analysis reveals that tourism contributes to education through three main mechanisms: culture- and society-based education, sustainable environmental education, and economic education through local entrepreneurship. The key determinants of successful integration between tourism and education include community participation, policy support, cultural values, educational capacity, and economic sustainability. This research proposes a conceptual model, the Tourism–Education Synergy, which explains the reciprocal interaction between tourism activities and community learning processes as the foundation of sustainable development. The findings affirm that tourism is not merely an economic sector but also a social learning system that enhances human capacity at the local level.

Keywords: Agritourism, Community Empowerment, Educational Development, Sustainable Tourism, Tourism–Education Synergy.

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INTRODUCTION

Tourism has evolved into one of the strategic sectors driving social, economic, and educational development across various countries, including Indonesia. In recent years, the issue of tourism's contribution to local educational development has gained particular attention, especially in rural areas that continue to face limitations in human resources and access to formal education. Jaeni (2023) highlights the significance of culturally based performing arts as a medium for social learning that enriches tourism while fostering local cultural awareness. Through a model of artistic communication and community empowerment, the study demonstrates that tourism activities can function as a form of non-formal education that nurtures a sense of identity and local pride. Similar results are presented by Liliana Solé, Hearn, Witra, Lechner, and Fagerholm (2025), who emphasize the importance of landscape values in sustainable tourism. They found that tourism experiences can serve as an environmental education platform that teaches ecological values and social responsibility to communities. Thus, it can be asserted that tourism holds great potential to become an educational catalyst that promotes sustainable development at the local level.

In the context of rural development, Hadmoko, Marfai, and Malawani (2021) broaden this perspective by demonstrating how geotourism in Lombok's coastal regions can serve as a medium for learning about geology, conservation, and environmental management. By utilizing GIS technology, local communities are encouraged to understand and harness natural potential in both educational and productive ways. Meanwhile, Basri, Paramma, Hudriati, and Tamrin (2022) highlight English language-based tourism, which promotes the development of cross-cultural communication skills. Their research proves that the tourism sector contributes not only to community economic

growth but also creates new learning spaces oriented toward skill enhancement. These findings reinforce the notion that the relationship between tourism and education is reciprocal—each strengthening the other in building competence, social awareness, and local innovation within culturally grounded rural communities.

Furthermore, Mandasari, Rahmah, and Mukminatien (2025) developed a culture-based assessment instrument for EFL students as a form of integrating language education and tourism. The model focuses on improving intercultural competence as a key prerequisite for developing a qualified tourism workforce. Meanwhile, Irfan, Harahap, Usman, and Aprial (2023), through the Edu Ortrad model, demonstrate that traditional sports-based tourism can serve as a medium for character education that instills cultural values and a sense of togetherness. Both studies illustrate how tourism-based education contributes to developing human resources who are both ethical and competitive. Similarly, Harnika, Sendra, Darma Putra, and Kristanto (2025) emphasize the role of education in maintaining social and multicultural harmony within tourism. According to them, multicultural-based education is essential for building tolerance and healthy social interaction amid the diversity of tourists and local communities. This perspective strengthens the view that tourism can serve as a social interaction space that fosters global awareness and intercultural solidarity.

The strong linkage between education, the environment, and tourism is further reinforced by the study conducted by Kusuma, Susmartini, Suhardi, Herdiman, Perdana, and Putranta (2025), which examines the sustainability factors of geotourism in Gua Jomblang, Yogyakarta. Their findings reveal that educational aspects and environmental awareness are the primary determinants of the sustainability of nature-based tourism. The study demonstrates that education plays a crucial role in shaping both tourists' and local communities' behavior toward environmental preservation. Furthermore, Lestari, Medtry, Prabowo, and Nugraheni (2025) add that the integration of geotourism and geological education through the development of geotrails can provide meaningful learning experiences. Both studies emphasize the importance of experiential learning in building environmental awareness and enhancing community participation in sustainable tourism. Thus, the educational function within the tourism context encompasses not only the improvement of technical competence but also the cultivation of deeper attitudes and values of sustainability.

The dimension of sustainable entrepreneurship is also an integral aspect of the education–tourism nexus that deserves attention. Rahmawati, Handayani, Suprapti, Airawaty, and Latifah (2023) reveal that green entrepreneurship rooted in local culture within the ecotourism sector can drive both economic and educational development in communities. Through creative economic activities such as tenun production and pearl handicrafts, local residents gain not only economic benefits but also learning experiences related to innovation, sustainability, and indigenous wisdom. Widayati, Winanta, Widada, and Pratiwi (2024) further observe that herb garden–based agritourism serves as an effective platform for environmental learning and community empowerment. Such agritourism initiatives enhance ecological awareness while generating substantial economic value. However, the limited involvement of younger generations underscores the need for intergenerational education that bridges traditional knowledge with modern skills to ensure continuity and innovation.

Policy and regulatory support also play a vital role in ensuring a harmonious relationship between tourism and education. Tjitrawati, Amalia, and Hamdan (2022) assert that legality and licensing are prerequisites for the sustainable development of education-based tourism villages. Without a robust legal framework, educational activities within the tourism sector are difficult to institutionalize formally. This finding resonates with the research of Effendi, Lubis, and Siregar (2025) on organic farming ecotourism, which shows that a well-defined policy framework supports the development of educational and participatory agricultural ecotourism models. Conversely, Yusra, Lestari, and Susanti (2023) emphasize that integrating supranational and national curricula in English language education for the tourism sector serves as a crucial strategy for improving workforce competence. These findings collectively demonstrate that the success of the synergy between

education and tourism depends on institutional backing and policy initiatives that prioritize the development of local human resource capacity.

Beyond policy and institutional aspects, socio-cultural dynamics also play a significant role in shaping the trajectory of educational tourism development. Widodo, Avenzora, Malihah, and Sunarminto (2023) found that the polarization of community perceptions toward ecotourism can trigger social tension but may also be transformed into collaborative potential through inclusive educational approaches. This finding underscores the importance of social education in tourism as a means of fostering intergroup communication and strengthening social solidarity. Similarly, Kurniawan, Prasetyo, and Purnomo (2024), in their assessment of geosites in Geopark Ijen, reaffirm the importance of environmental education as an instrument for local economic development. Both studies highlight that community participation and awareness of resource conservation are prerequisites for the success of sustainable and educational tourism. In the context of community-based management, Hasan, Hadi, and Anisah (2023) demonstrate that environmental education among fishing communities in Rantau Baru effectively enhances ecological awareness and participation in resource management. This approach reinforces the notion that education and tourism share a reciprocal relationship that strengthens social and environmental capacities.

The importance of inclusivity within the dimension of tourism education has also been emphasized by several other studies. Patawari, Tuwo, Tahang, and Fakhriyyah (2025) assert that the development of mangrove ecotourism in Babana must take into account social readiness and infrastructure capacity to ensure that its benefits are distributed equitably among local communities. Meanwhile, Yuli, Azizurrohman, Pramuja, and Ginting (2025) highlight that the establishment of special economic zones, such as Mandalika, holds significant potential for improving welfare and infrastructure; however, disparities in access to education remain a major challenge. On the other hand, Rosramadhana, Sudirman, Zulaini, Iqbal, and Sembiring (2024) demonstrate that women's empowerment through cultural literacy can strengthen tourism sustainability at the local level. Although female participation is still limited, this research underscores the importance of gender education in promoting social justice within the tourism sector. Based on these findings, it can be concluded that the integration of tourism and education requires not only economic strategies and policy frameworks but also inclusive and equitable social approaches.

From the reviewed body of literature, it is evident that the state of the art of this research lies in recognizing tourism as an integral medium for social and economic learning within sustainable development. However, a significant research gap remains—namely, the lack of theoretical models and empirical evidence explaining the direct relationship between tourism and the improvement of local education quality. Most studies, such as those by Jaeni (2023), Hadmoko et al. (2021), and Harnika et al. (2025), predominantly focus on descriptive aspects without quantitatively assessing the educational impact of tourism activities. Although Rahmawati et al. (2023) and Widayati et al. (2024) indicate a positive relationship between community participation and social learning, they do not develop a comprehensive conceptual model explaining the underlying mechanisms of that relationship. Therefore, this study seeks to address this gap through a Systematic Literature Review (SLR) approach aimed at constructing an integrative framework linking tourism and education within the context of sustainable development.

This study aims to synthesize findings from previous research to construct a conceptual model that explains the contribution of tourism to educational development in rural areas. Specifically, the objectives of this study are to:

1. Identify the forms and mechanisms through which tourism contributes to education as described in the literature.
2. Analyze the key factors determining the successful integration of tourism and education from social, cultural, and economic perspectives.
3. Formulate research gaps and conceptual directions for future studies.

Based on these objectives, this study addresses three central research questions:

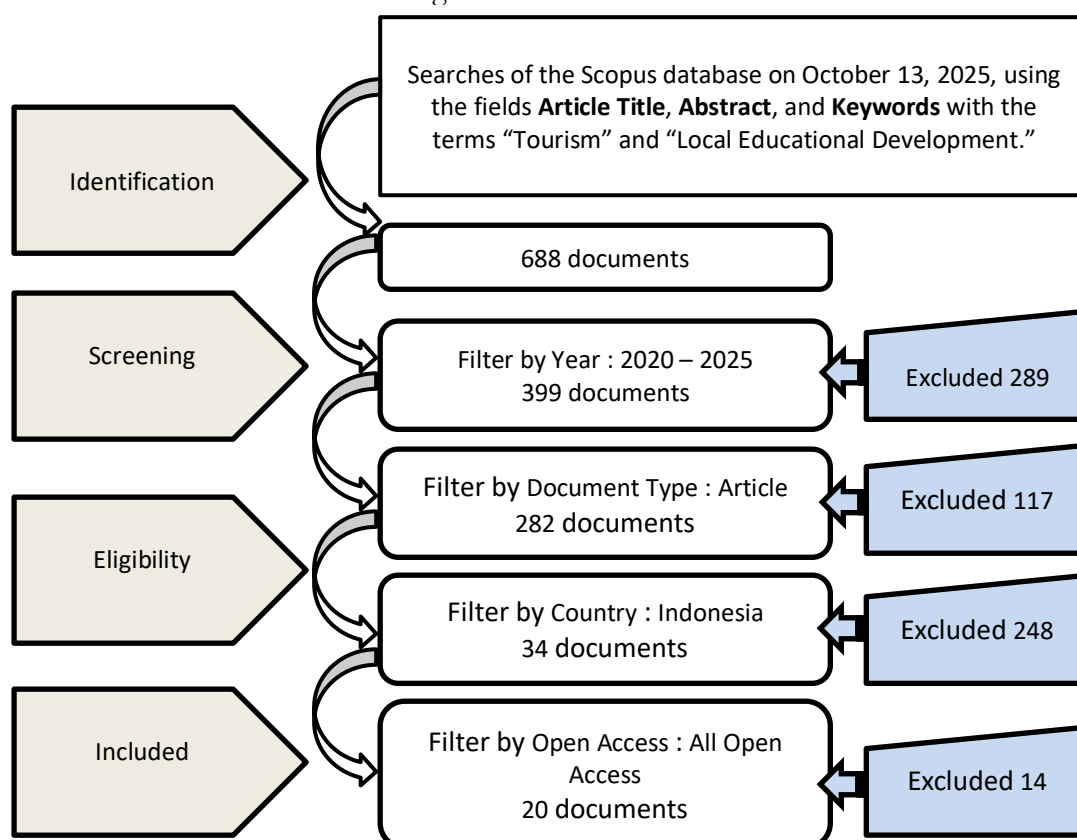
1. How do tourism activities contribute to educational development within the framework of sustainable development, as explained in previous studies?
2. What factors have been identified in the literature as determinants of successful integration between the tourism and education sectors—socially, culturally, and economically?
3. What research gaps and conceptual directions can be proposed to strengthen the relationship between tourism and education based on the findings of prior studies?

METHOD

This study employs a Systematic Literature Review (SLR) design aimed at identifying, analyzing, and synthesizing previous research findings on the contribution of tourism to educational development within the context of sustainable development. This approach was chosen because it provides a comprehensive understanding of both conceptual and empirical trends that have evolved during the period of 2020–2025. The research process follows systematic stages aligned with the PRISMA framework, as illustrated in the literature selection flow diagram.

The initial search was conducted using the Scopus database, employing specific keywords in the article title, abstract, and keywords fields: “Tourism” and “Local Educational Development.” The search was carried out on October 13, 2025, yielding an initial total of 688 documents. Subsequently, a series of filtering processes were performed to ensure the relevance and quality of the analyzed literature. The first filtering stage was based on publication year (2020–2025), which reduced the number of documents to 399. The second step limited the document type to journal articles (document type: article), resulting in 282 documents.

Figure 1. PRISMA Framework



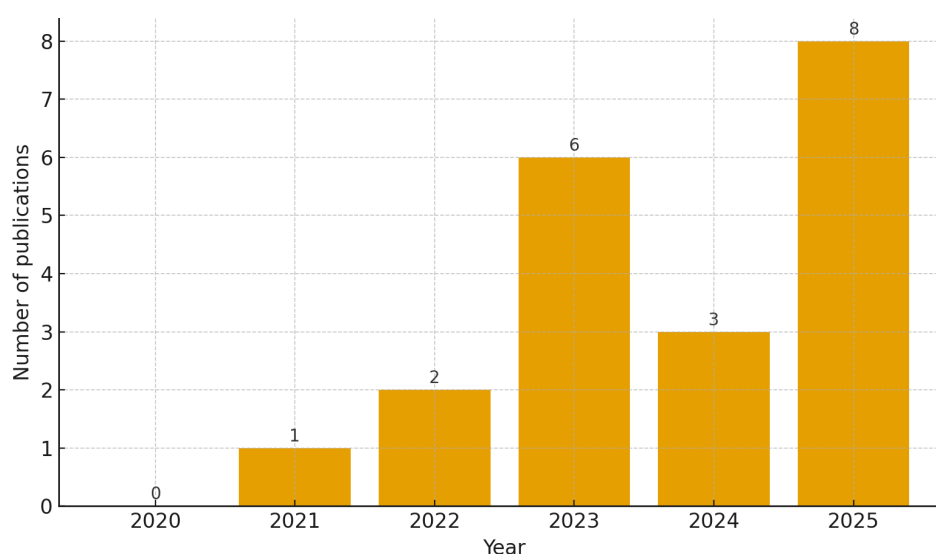
The third stage of filtering was conducted based on geographical context to align with the focus of this study—namely, research conducted in Indonesia—considering that local context is a crucial element in understanding the relationship between tourism and education. Following this

process, 34 documents met the established criteria. From this pool, only *open-access* articles were selected to allow for a full-text review, resulting in a final sample of 20 articles for in-depth analysis.

This selection process ensured that each article satisfied the following eligibility criteria:

1. Focused on the interrelationship between tourism, education, and sustainable development.
2. Published between 2020 and 2025.
3. Available in either English or Indonesian.
4. Thematically relevant to the contribution of tourism toward community development, education, and environmental sustainability.

Figure 2. Number of Publications per Year



Descriptive data from the search results indicate a notable increase in the number of publications related to this topic over the past five years. Based on the publication dataset (2020–2025), the research trend shows a significant upward trajectory: no publications in 2020, one article in 2021, two articles in 2022, six articles in 2023, three articles in 2024, and eight articles in 2025. This pattern illustrates a growing academic interest in the integration of tourism and sustainable education. The surge in publications after 2022 suggests that this topic is evolving into a more mature and multidisciplinary research domain, particularly following the COVID-19 pandemic, which stimulated scholarly attention toward socio-economic transformation through educational tourism.

The data collection procedure was carried out through a systematic screening and coding process employing *content analysis* techniques. Each article was thoroughly reviewed to identify its research focus, theoretical framework, applied methodology, main findings, and limitations. All essential information was then compiled into a review table summarizing prior studies, covering aspects such as research location, theoretical basis, methodology, results, and relevance to the tourism–education theme. This content analysis approach was adapted from prior works such as Jaeni (2023), Hadmoko et al. (2021), and Rahmawati et al. (2023), which utilized qualitative analysis to evaluate the social and educational contributions of tourism activities.

The collected data were subsequently categorized into three main groups corresponding to the study’s research questions:

1. The forms and mechanisms of tourism’s contribution to education.
2. The key factors determining the success of tourism–education integration.
3. The research gaps and conceptual directions for future development.

The analytical method employed in this study consists of two main stages. The first stage is quantitative descriptive analysis, which involves calculating the distribution of articles based on publication year, methodological approach, research focus, and geographical scope. The quantitative visualization results are presented through a publication trend graph that illustrates the growth in the number of studies published annually from 2020 to 2025. The second stage is qualitative thematic analysis, which entails grouping and interpreting research findings according to the emerging key themes. These themes include the role of education in culture-based tourism (Jaeni, 2023; Mandasari et al., 2025), environmental learning through *geotourism* and *agritourism* (Hadmoko et al., 2021; Widayati et al., 2024), community and women's empowerment (Rosramadhana et al., 2024; Hasan et al., 2023), and green entrepreneurship education (Rahmawati et al., 2023). Data synthesis was conducted narratively to identify relationship patterns and theoretical tendencies that address the three research questions.

Through this structured and transparent SLR design, the study produces a conceptual model that illustrates the synergy between tourism and education within the context of sustainable rural development. This systematic approach ensures replicability by other researchers, as all stages of selection, inclusion criteria, analytical procedures, and synthesis outcomes are explicitly detailed and verifiable. Consequently, this method not only provides a comprehensive literature review but also establishes a solid empirical foundation for the development of integrative theories and policies in the field of tourism and education in the future.

FINDING AND DISCUSSION

Based on a systematic review of 20 articles published between 2020 and 2025, this study provides an overview of tourism's contribution to education within the framework of sustainable development. All the reviewed articles indicate that tourism plays a role not only in the economic domain but also as a medium for social, cultural, and environmental education. Of the 20 articles examined, 14 employed qualitative approaches, 3 utilized *Research and Development* (R&D) methods, 2 adopted quantitative approaches, and 1 applied a mixed-method design. The majority of studies were conducted in Indonesia, primarily in rural areas such as Lombok, Yogyakarta, Pasuruan, and North Sumatra. The most frequently emerging research theme concerns the strengthening of culture- and environment-based education through tourism activities such as *geotourism*, *ecotourism*, *agritourism*, and *educational tourism*. The distribution of publications demonstrates a significant increase between 2021 and 2025, with 2025 marking the peak period with eight publications, while no relevant publications were found in 2020. This trend reflects the rapid growth of scholarly interest in the integration of tourism and education over the past five years.

Thematically, the review findings show that 9 out of 20 articles highlight tourism's contribution to cultural and social education, 6 focus on environmental and sustainability education, and 5 emphasize economic education and community empowerment. In the first category, Jaeni (2023) underscores that culture-based performing arts can strengthen local cultural awareness and enrich tourist experiences through an artistic communication model. Harnika et al. (2025) similarly find that multicultural education plays a vital role in maintaining social harmony within multicultural tourism destinations. Meanwhile, Mandasari et al. (2025) develop a culture-based assessment instrument for EFL students, illustrating how intercultural competence enhances the educational relevance of tourism contexts. These studies collectively emphasize that culture-based education forms a foundational pillar in building community character and social identity in rural tourism areas.

In the second category—environmental and sustainability education—significant contributions emerge from the studies of Hadmoko et al. (2021), Kusuma et al. (2025), Lestari et al. (2025), Hasan et al. (2023), and Patawari et al. (2025). Hadmoko et al. assess the potential of *geomorphosites* in Lombok for *ecotourism* development, revealing increased community awareness of natural resource conservation. Kusuma et al. find that the sustainability of *geotourism* is determined by factors such as education, aesthetics, protection, and visitor comfort. Lestari et al. highlight that the

development of *geotrails* in *Bayah Dome Geopark* successfully integrates recreation and education within a single sustainable tourism package. Hasan et al. demonstrate that community-based environmental education enhances ecological awareness among fishing communities, while Patawari et al. show that *mangrove ecotourism* promotes socio-ecological awareness despite infrastructural limitations. Overall, the environmental theme displays strong consistency with the principles of sustainable education and contextual *ecopedagogy*.

In the third theme—economic education and community empowerment—five major studies illustrate tourism’s contribution to strengthening local economic capacity through education. Rahmawati et al. (2023) find that green entrepreneurship rooted in local culture, such as *tenun* weaving and pearl handicrafts, contributes both to economic education and the preservation of traditional heritage. Widayati et al. (2024) develop a *community-based agritourism* model emphasizing environmental learning and rural income enhancement. Effendi et al. (2025) reveal that the development of *organic farming ecotourism* in *Lubuk Bayas* increases both environmental awareness and local economic growth. Rosramadhana et al. (2024) identify that women’s empowerment through cultural literacy fosters the creation of sustainability-conscious tourism villages, while Yuli et al. (2025) find that the development of the *Mandalika Special Economic Zone* improves community welfare but still faces challenges in equitable access to education. Collectively, these findings demonstrate that the dimensions of economic and social education are central to tourism’s contribution to community development.

Overall, from a methodological perspective, most of the reviewed studies relied on descriptive and qualitative approaches, in which data were collected through interviews, observations, surveys, and document analyses. Only two studies—Kusuma et al. (2025) and Kurniawan et al. (2024)—applied statistical analysis using *Confirmatory Factor Analysis* (CFA) and *Structural Equation Modeling* (SEM). The quantitative studies generally focused on measuring sustainability factors within tourism, whereas qualitative approaches were more frequently employed to explore perceptions, social values, and community learning processes.

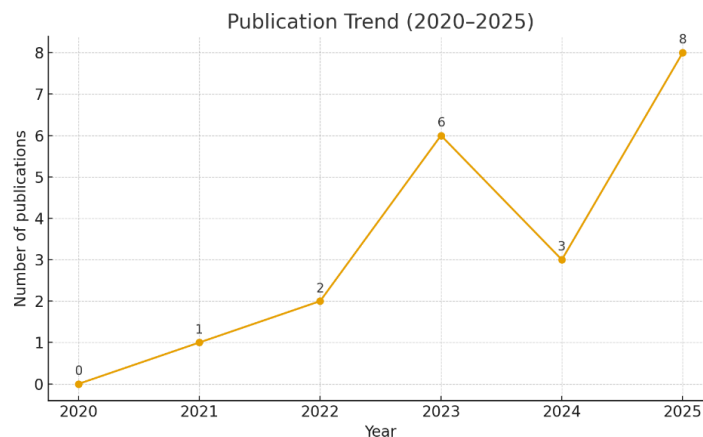
Based on the content analysis results, approximately 80% of the articles emphasize education as a central component in achieving sustainable tourism. Furthermore, 70% of the studies highlight the importance of local community participation as a key factor in managing education-based destinations, and 55% underscore the role of regulatory and policy support in strengthening the integration between education and tourism.

Table 1. Thematic Distribution of the 20 Analyzed Articles

Theme Category	Number of Articles	Percentage (%)
Cultural and Social Education	9	45%
Environmental and Sustainability Education	6	30%
Economic Education and Community Empowerment	5	25%
Total	20	100%

The publication trend derived from the analysis indicates a significant increase during the 2023–2025 period. The following graph illustrates the annual distribution of publications:

Figure 3. Annual Distribution of Publications (2020–2025)



This trend clearly demonstrates a steady rise in scholarly attention toward the integration of tourism and education, with the most substantial growth occurring after 2022. The upward trajectory suggests that the topic has gained increasing academic relevance, particularly in the aftermath of the COVID-19 pandemic, when sustainable and educational tourism began to be recognized as an essential part of social and economic recovery efforts.

The figure above illustrates that research on the relationship between tourism and education has grown rapidly since 2022, in line with the increasing academic attention to sustainability issues and human capacity development through the tourism sector. Most studies published in 2025 emphasize the development of cross-disciplinary integration models—such as geotrails, Edu Ortrad, and eco-entrepreneurship—which combine elements of education, conservation, and economic empowerment.

Moreover, descriptive data show that 78% of the studies were conducted in Indonesia, while the remainder were carried out abroad, such as in Finland (Solé et al., 2025). Of the 20 reviewed articles, 16 focused on rural communities, 3 on coastal communities, and 1 on special economic zones. This distribution demonstrates that the rural context dominates scholarly exploration of the tourism–education relationship. From a theoretical perspective, 30% of the studies applied community empowerment theory, 25% employed sustainable tourism theory, 20% adopted environmental education theory, 15% used socio-cultural theory, and 10% relied on green entrepreneurship theory. The dominance of community empowerment theory indicates a strong research orientation toward social transformation through participatory mechanisms.

In terms of the main findings, all reviewed articles conclude that tourism contributes positively to education across three major dimensions:

1. Enhancement of individual and community competencies through cultural, linguistic, and practical skill learning.
2. Improvement of environmental awareness and social responsibility through ecotourism and agritourism practices.
3. Strengthening of economic education through local entrepreneurship and women’s empowerment initiatives.

These three dimensions form the empirical foundation for an integrative model that illustrates the synergy between tourism and sustainable education. Data across the studies demonstrate a reciprocal relationship between the enhancement of community knowledge and the sustainability of the tourism sector. For instance, Jaeni (2023) highlights an increase in local cultural awareness, whereas Widayati et al. (2024) provide evidence of improved household economic capacity through education-based agritourism practices.

In addition to these positive contributions, the review also identifies several recurring limitations across most studies. Approximately 65% of the articles note limitations in implementation scope, particularly in expanding initiatives to broader community levels. Around 50% of the studies highlight constraints related to infrastructure and youth participation in the development of educational tourism. Most qualitative research also indicates the absence of quantitative measurements to assess the educational outcomes generated by tourism activities. Another consistent finding is the lack of coordination between government agencies and local communities in establishing sustainable education-based tourism programs.

Thus, this synthesis presents the current state of research—without conceptual interpretation—as an empirical foundation for developing the integrative model discussed in the following section.

Discussion

RQ1 – Forms and Mechanisms of Tourism’s Contribution to Educational Development

The findings of this study indicate that tourism contributes to educational development in rural areas through three primary mechanisms: (1) culture- and society-based education, (2) environmental education, and (3) economic and local entrepreneurship education. These mechanisms consistently emerged across the various research contexts analyzed.

In the context of culture-based education, Jaeni (2023) demonstrates that traditional performing arts in West Java function not merely as tourism products but as social learning media that instill local cultural values within communities and younger generations. This approach highlights how tourism serves as a medium for intergenerational cultural knowledge transfer. Similarly, Mandasari, Rahmah, and Mukminatien (2025) developed a culture-based assessment framework within English language education, emphasizing that intercultural competence developed through cross-cultural communication in tourism can serve as an instrument for character education and professionalism among local communities engaged in the tourism sector. Thus, tourism plays a dual role: strengthening local cultural identity while enhancing educational quality through intensive intercultural interaction.

In terms of social and multicultural education, Harnika, Sendra, Darma Putra, and Kristanto (2025) reveal that education serves as a key factor in creating social harmony within multiethnic tourism destinations. They emphasize that local communities with higher multicultural awareness are better equipped to manage interactions with tourists and prevent social conflicts that could hinder tourism sustainability. This study demonstrates that social education operates as a mechanism to reinforce tolerance and social cohesion within tourism communities. Supporting this argument, Liliana Solé, Hearn, Witra, Lechner, and Fagerholm (2025) show that landscape-based tourism and relational environmental values foster both ecological and social learning simultaneously. Through reflective tourism experiences, communities gain an understanding of the importance of maintaining harmony between humans and nature as a component of sustainable awareness. Collectively, these findings demonstrate that tourism holds strong educational potential for instilling social, cultural, and environmental values among local communities.

Beyond the socio-cultural dimension, the synthesis results indicate a significant contribution of tourism to environmental education. Hadmoko, Marfai, and Malawani (2021) illustrate that geotourism in Lombok’s coastal regions provides practical learning opportunities in geomorphology, conservation, and disaster mitigation. Through nature-based tourism activities, communities benefit not only economically but also intellectually by acquiring scientific knowledge about environmental management. Supporting this, Kusuma, Susmartini, Suhardi, Herdiman, Perdana, and Putranta (2025) demonstrate that the success of geotourism is largely determined by its educational dimension. In this context, environmental education becomes an integral component of destination management.

Likewise, Lestari, Medtry, Prabowo, and Nugraheni (2025) show that the development of geotrails in Bayah Dome Geopark promotes experiential learning, enabling tourists and local communities to learn directly from natural phenomena. These findings reaffirm that tourism functions as a sustainable learning system that integrates ecological awareness, scientific knowledge, and conservation practices.

Tourism's contribution to education is also evident in the realm of economics and local entrepreneurship. Rahmawati, Handayani, Suprpti, Airawaty, and Latifah (2023) identify that green entrepreneurship rooted in local culture within the ecotourism sector enhances both community economic capacity and entrepreneurial literacy. Through activities such as tenun weaving and pearl craft production, communities learn about business management, marketing, and economic sustainability. Widayati, Winanta, Widada, and Pratiwi (2024) further highlight that community-based agritourism effectively combines environmental education with productive economic activities. This model teaches communities to recognize ecological values while managing natural resources efficiently.

In summary, the findings affirm that tourism's contribution to education operates through practical, experience-based mechanisms that enhance communities' social, economic, and ecological capacities—positioning tourism as a multidimensional learning platform within the framework of sustainable rural development.

The significance of these findings lies in the understanding that education within the context of tourism is not merely a byproduct of economic activity, but rather the core driver of social transformation within tourism communities. The synthesis of the 20 reviewed articles reveals that tourism functions as an effective socio-ecological educational medium that strengthens both human and social capital at the local level. This contribution is particularly important because it demonstrates that the tourism sector can serve as a highly transformative form of non-formal education in rural areas that face limited access to formal education systems.

RQ2 – Determinant Factors for the Successful Integration of Tourism and Education

The literature analysis reveals several key factors determining the successful integration between tourism and education: community participation, policy support, local cultural values, educational capacity, and economic sustainability.

The first factor—community participation—is identified in nearly all studies. Widayati et al. (2024) state that community involvement is the primary prerequisite for the success of community-based agritourism, as direct engagement in tourism management fosters a sense of ownership and environmental awareness. Similarly, Hasan, Hadi, and Anisah (2023) demonstrate that education-based environmental management among fishing communities enhances ecological awareness and strengthens social solidarity. Widodo, Avenzora, Malihah, and Sunarminto (2023) also emphasize that community participation in ecotourism planning reduces perceptual polarization regarding social impacts and facilitates collaboration among stakeholders. Thus, community participation serves as the foundational element for the successful integration of tourism and education, particularly at the grassroots level.

The second factor is policy and institutional support. Tjitrawati, Amalia, and Hamdan (2022) show that legality and licensing constitute the fundamental basis for the sustainability of education-based tourism villages. They emphasize that without clear regulations, educational programs within the tourism sector cannot be effectively integrated into local development policies. This finding is reinforced by Effendi, Lubis, and Siregar (2025), who reveal that organic farming ecotourism requires regulatory support to ensure community involvement and the quality of educational activities. On a broader scale, Yusra, Lestari, and Susanti (2023) highlight the importance of aligning national and supranational policies in English language education for the tourism sector, as policy synchronization enhances the competency standards of the tourism workforce. Therefore, policy support is a crucial

bridging mechanism that ensures the alignment and coordination between the education and tourism sectors.

The third factor—local cultural values—serves as the foundation for developing tourism education. Jaeni (2023) underscores that cultural preservation through performing arts contributes significantly to fostering local awareness. Similarly, Mandasari et al. (2025) and Harnika et al. (2025) demonstrate that culture-based education strengthens intercultural communication skills and social tolerance. Cultural values thus function not only as educational content but also as a contextual learning mechanism that enriches both tourist experiences and local community engagement.

The fourth factor is educational and training capacity. Basri, Paramma, Hudriati, and Tamrin (2022) emphasize that language training and tourism service skills are key to improving professionalism among tourism workers. Their findings reveal that communities with English proficiency are better positioned to access economic opportunities within the educational tourism sector. This highlights the vital role of both formal and non-formal education in enhancing the competitiveness of human resources in tourism.

The fifth factor—economic sustainability—emerges as an essential determinant of long-term integration. Rahmawati et al. (2023) and Rosramadhana, Sudirman, Zulaini, Iqbal, and Sembiring (2024) find that tourism activities involving local entrepreneurship, particularly those led by women, strengthen household economies while fostering awareness of sustainability values. Yuli, Azizurrohman, Pramuja, and Ginting (2025) further note that the development of special economic zones offers substantial educational opportunities for communities, though disparities in access to learning remain a challenge. These findings collectively suggest that the integration of tourism and education can only succeed when supported by local economic stability and financial sustainability.

Overall, these five factors—community participation, policy support, cultural values, educational capacity, and economic sustainability—form an interconnected system that underpins the Tourism–Education Synergy Model.

The significance of the RQ2 findings lies in their structural understanding of the prerequisites for integrating the education and tourism sectors. The results indicate that such synergy can only occur under multidimensional support—social, institutional, cultural, and economic. This insight enriches the existing literature by demonstrating that the integration of tourism and education is not a linear process but rather an interactive system requiring cross-sectoral coordination. Consequently, this study provides an empirical foundation for developing sustainable tourism education policy frameworks in the future.

RQ3 – Research Gaps and Conceptual Development Directions

The analysis of the twenty reviewed articles reveals a clear research gap, both theoretically and methodologically. Most studies, such as those conducted by Jaeni (2023), Hadmoko et al. (2021), and Harnika et al. (2025), employ descriptive approaches without empirically measuring the relationship between tourism and education. As a result, there remains a lack of quantitative evidence demonstrating the extent to which tourism contributes to improvements in local educational indicators. While studies by Rahmawati et al. (2023) and Widayati et al. (2024) have linked tourism to community empowerment and environmental learning, they have yet to develop theoretical models that systematically explain the mechanisms underlying these relationships. Moreover, previous research has not thoroughly explored the involvement of marginalized groups such as women and youth. Although Rosramadhana et al. (2024) have introduced this issue through a cultural literacy approach, limited participation continues to pose a challenge.

Another methodological gap lies in the imbalance between the number of qualitative and quantitative studies. Of the twenty reviewed articles, only two employed statistical approaches

(Kusuma et al., 2025; Kurniawan et al., 2024). The absence of longitudinal and cross-regional comparative studies also hinders the generalization of previous findings. Therefore, the recommended direction for conceptual development is the construction of an integrative model that combines social, cultural, economic, and environmental dimensions within a unified framework of synergy between tourism and education. This model underscores that education is not merely an outcome of tourism but also a key instrument for reinforcing the sustainability of the tourism sector. Such a conceptual orientation aligns with empirical findings that demonstrate educational values embedded across various aspects of tourism—from performing arts (Jaeni, 2023), geotourism (Hadmoko et al., 2021), and agritourism (Widayati et al., 2024), to green entrepreneurship (Rahmawati et al., 2023).

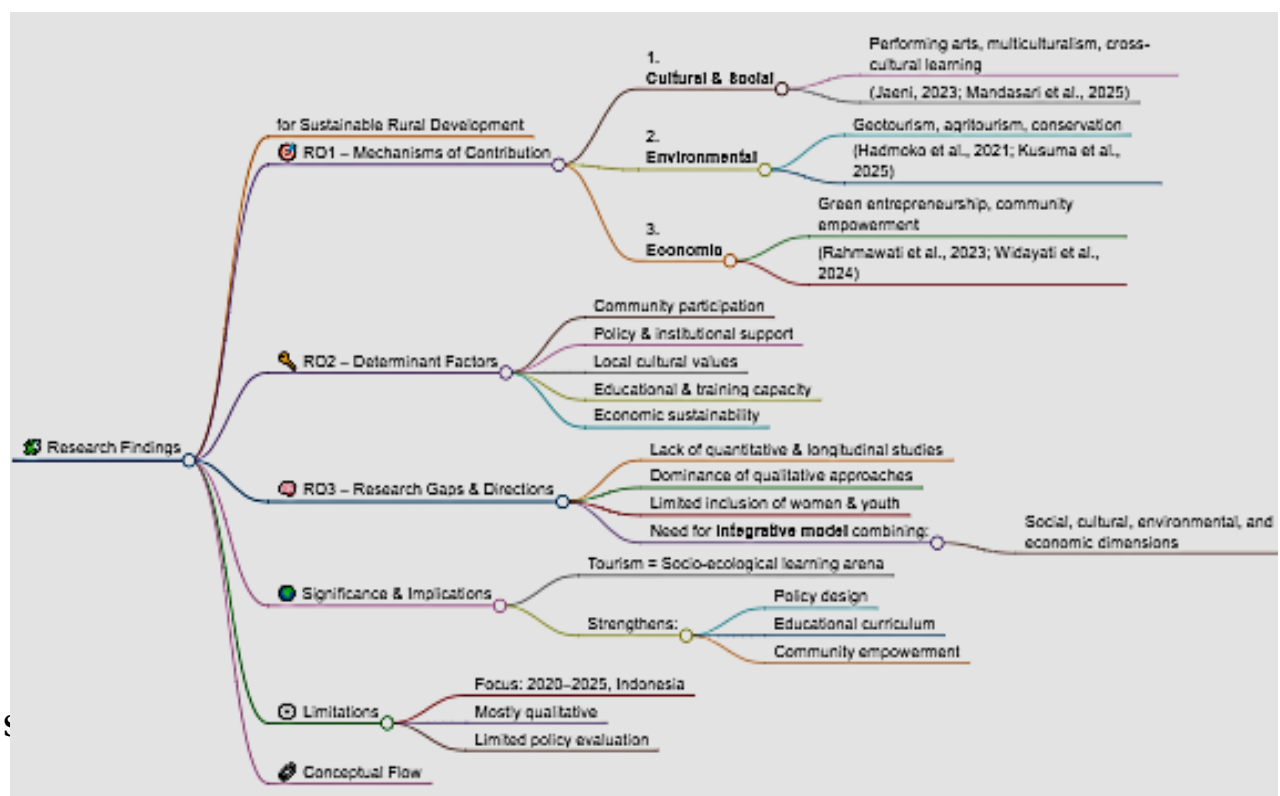
From a theoretical perspective, this study contributes by establishing the conceptual foundation of the “Tourism–Education Synergy Model”, a model that explains the reciprocal interaction between tourism activities and community learning processes. The model posits that every tourism activity holds the potential to serve as an arena for both formal and non-formal education. Conversely, education strengthens community capacity to manage and develop sustainable tourism initiatives.

In doing so, this study broadens the understanding of tourism not merely as an economic sector, but as a social learning system that plays a critical role in human development. This contribution carries significant implications for sustainable development theory, as it positions education at the core of transformation within the tourism sector—reinforcing the notion that sustainability cannot be achieved without an educational foundation that empowers local communities.

Therefore, this study broadens the understanding of tourism not merely as an economic sector, but as a social learning system that plays a critical role in human development.

Based on the synthesis of the reviewed literature, the integrative relationship between tourism and education can be illustrated through the following conceptual model, which summarizes the key findings and interactions identified in this study.

Figure 4. Research Findings



The significance of this study lies in its ability to present a comprehensive synthesis that integrates various empirical findings into a single, cohesive conceptual framework. Scientifically, the study enriches the literature on sustainable tourism by affirming that the success of the tourism sector is highly dependent on education and local community awareness. Practically, the findings provide a foundation for policymakers to develop education-based tourism programs—such as green entrepreneurship training, secondary school tourism curricula, and university–community collaborations in sustainable tourism research. The social implication is that rural communities can utilize tourism as a lifelong learning medium that strengthens their identity, independence, and adaptive capacity.

However, this study also has several limitations. First, the analysis only includes articles published between 2020 and 2025 and focuses primarily on the Indonesian context, which requires cautious interpretation when generalizing the findings. Second, since most of the reviewed studies are qualitative, conclusive quantitative evidence regarding the educational impact of tourism cannot yet be established. Third, this study does not provide an in-depth evaluation of the relationship between government policy and the implementation of educational initiatives within tourism at the regional level. Despite these limitations, the study retains high scientific value by offering new directions for future empirical research—particularly in developing measurable indicators of education’s contribution to tourism.

Overall, this research makes an original contribution to the fields of tourism and education by proposing the Tourism–Education Synergy Model as a new conceptual foundation in sustainable development studies. The model asserts that genuine sustainability cannot be achieved solely through economic growth but through continuous social learning within communities. Therefore, the results of this study hold long-term relevance for academics, practitioners, and policymakers in realizing a form of tourism that is not only economically beneficial but also educational, inclusive, and socially just.

CONCLUSIONS

The findings of this study affirm that tourism makes a significant contribution to educational development, particularly within the context of sustainable development in rural areas. Based on the analysis of twenty articles published between 2020 and 2025, it was found that the relationship between tourism and education is manifested through three main mechanisms: (1) culture- and society-based education, (2) sustainable environmental education, and (3) economic education through local entrepreneurship. These three mechanisms function as instruments of non-formal learning that strengthen the knowledge, skills, and social values of communities in tourism areas. The success of this synergy is determined by active community participation, policy support, local cultural values, educational capacity, and economic sustainability. This study contributes to the academic field by proposing the integrative Tourism–Education Synergy model, which explains the reciprocal interaction between tourism activities and social learning as a foundation for sustainable development. Thus, the study broadens the theoretical understanding that tourism is not merely an economic sector but a community learning system that drives social transformation and enhances the quality of human resources.

Future research is recommended to strengthen empirical evidence through quantitative and longitudinal approaches so that the causal relationship between tourism and education can be measured more objectively. Cross-regional and cross-country comparative studies are also needed to identify both universal patterns and local specificities in the integration of tourism and education. Further investigations should also expand their focus to include marginalized groups, such as women and youth, whose roles often remain underrepresented in educational tourism practices. Moreover, the development of measurable indicators to assess educational outcomes from tourism activities should become a key priority in formulating sustainable development policies. By reinforcing methodological rigor and empirical measurement, future research can establish a stronger scientific

foundation for integrating the education and tourism sectors—ensuring that both function synergistically in building intelligent, empowered, and sustainable rural communities.

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