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Local Resilience Edu-Tourism for Building Sustainability: A PRISMA-Based Systematic Review

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Abstract

Sustainable tourism scholarship has long treated education as a lever for changing visitor behavior and community practices. This review examines whether the two have been integrated into the design of educational tourism and explores the implications for sustainability when they have not. Following PRISMA 2020 guidelines, we screened 203 Scopus-indexed articles published between 2021 and 2026 and retained 131 studies that combined an educational or interpretive function with an explicit sustainability construct. Each study was coded according to research design, setting, educational mechanism, sustainability outcome, and resilience sub-construct, and the corpus was mapped through keyword co-occurrence analysis using VOSviewer. Nine of the 131 studies (6.9%) integrated education, local resilience, and sustainability. Adaptive capacity appeared in two studies, livelihood diversification in one study, and no article published before 2025 used the term resilience. Educational efforts primarily focused on visitor awareness (42.7%), whereas community-based mechanisms that could strengthen local adaptive capacity, such as training (22.9%) and curriculum development (16.0%), received considerably less attention. Only 4.6% of the studies followed participants beyond a single measurement point, limiting the ability of the field to determine whether educational outcomes persist over time. We interpret this pattern as a structural absence rather than a collection of isolated oversights: the literature has predominantly developed a visitor-centered, cross-sectional, and outcome-oriented understanding of educational tourism while rarely examining how such initiatives function when destinations experience disruption. Based on these findings, we propose the Resilience-Based Edu-Tourism (RBET) framework as an approach for integrating educational tourism with local resilience and sustainability objectives.

INTRODUCTION

Tourism destinations often fail in ways that planners rarely anticipate. A volcanic eruption can close access roads for an entire season; a currency shock can eliminate long-haul markets; and a pandemic can empty a village that has reorganized its entire economy around visitors. What survives these events, and what does not, has become one of the most urgent questions in tourism research (Alim et al., 2024). However, the field's answers remain disconnected from its parallel enthusiasm for education (Abdurakhmanova & Ahrorov, 2025).

That enthusiasm is real and well documented. Environmental education enhances tourists' responsible behavior (Wang et al., 2022), heritage interpretation supports the sustainable management of cultural sites (Nowacki, 2021), and structured learning experiences encourage ecotourism consumption toward lower-impact choices (Yang et al., 2023). Educational tourism has developed its own demand models (Hussein et al., 2026) and curriculum debates (Fernández-Villarán et al., 2024). Underlying these developments is the assumption that better-informed visitors or better-trained operators can contribute to more sustainable destinations (Einarsdóttir & Helgadóttir, 2022; Ezeh & Dube, 2024; Farhan et al., 2025; Fernández-Villarán et al., 2024; Gravitiani et al., 2026) .

Resilience thinking begins from a different premise. It examines not only how a system performs under normal conditions but also how it absorbs disturbances, reorganizes, and maintains its functions. When applied to communities, resilience is commonly understood through dimensions such as adaptive capacity, social capital, livelihood diversity, institutional memory, and locally held environmental knowledge (Guerra & Gonçalves, 2024; Halder & Sarda, 2021; Hasmira et al., 2025; Hassan et al., 2021) . These are characteristics of people and their relationships rather than solely of visitor experiences. A destination may perform well across sustainability indicators yet remain vulnerable when a shock occurs because these indicators often measure current performance rather than the capacity to recover and adapt (Jiménez-Márquez et al., 2026; Jones & Walmsley, 2022; Kitole & Sesabo, 2024; Kropinova et al., 2023; Kubalíková et al., 2022) .

The gap between these two bodies of literature is where this review is positioned. If educational tourism is built upon the knowledge communities already possess regarding environmental management, and if learning processes are directed toward community members as well as visitors, education can move beyond a service delivered to tourists and become a mechanism through which destinations strengthen their own resilience. This proposition is intuitive enough that it would be expected to have been extensively studied. However, it has not.

We tested this expectation systematically. Using a Scopus-indexed corpus of 203 articles published between 2021 and 2026, we applied PRISMA 2020 screening procedures to identify studies that combined an educational or interpretive function with an explicit sustainability construct. The resulting 131 studies were then coded according to their treatment of resilience. The central empirical finding of this review is that only nine studies (6.9% of the included literature) connected all three constructs. This absence is not random; rather, it follows a specific pattern concentrated in particular methodologies, units of analysis, and research time horizons. This pattern reveals how the field has defined and examined the object of educational tourism research.

This review makes three contributions. First, it quantifies the integration gap through a reproducible coding protocol, replacing the general assertion that "more research is needed" with a measurable account of what remains insufficiently explored and where these gaps occur. Second, it maps the intellectual structure of the field through keyword co-occurrence analysis, demonstrating that resilience concepts remain absent from the overall co-occurrence structure, suggesting conceptual separation rather than a developed research trajectory. Third, it proposes the Resilience-Based Edu-Tourism (RBET) framework as a means of establishing the missing

connection between educational tourism, local resilience, and sustainability, and derives three research questions that can be examined through empirical approaches.

The paper proceeds as follows. Section 2 presents the conceptual background of the three constructs and explains the rationale for examining their interrelationships. Section 3 describes the systematic review protocol. Section 4 presents descriptive, bibliometric, and thematic findings. Section 5 identifies six research gaps, introduces the Resilience-Based Edu-Tourism (RBET) framework, and discusses its theoretical and practical implications. Sections 6 and 7 present the limitations and conclusions of the review.

The purpose of this study is to systematically examine the extent to which educational tourism research integrates local resilience and sustainability and to propose a framework for connecting these constructs (Heriyanto et al., 2025; Hung et al., 2023; Hussein et al., 2026; Issakov et al., 2025; Janchai & Suvittawat, 2025). The specific research objectives are: (1) to describe the characteristics of literature combining education and sustainability in tourism; (2) to map the intellectual structure of the field through keyword co-occurrence analysis; (3) to analyze the treatment of resilience sub-constructs and educational mechanisms across the corpus; (4) to identify studies integrating all three constructs and characterize their features; (5) to develop a taxonomy of research gaps; and (6) to propose the Resilience-Based Edu-Tourism (RBET) framework and derive testable research questions. The research questions are: (1) What is the intellectual structure of the field combining educational tourism and sustainability? (2) To what extent is resilience integrated into this literature? (3) What research gaps emerge from the existing integration patterns, and what framework can address these gaps?

METHOD

Protocol and Reporting Standard

The review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2020) statement. The protocol specified the search strategy, eligibility criteria, screening procedures, data extraction fields, and synthesis approach before the screening process began. The review employed a qualitative and bibliometric synthesis approach; no meta-analysis was conducted due to the heterogeneity of study designs, measurement approaches, and units of analysis among the included studies, which prevented reliable pooled effect estimation.

Information Sources and Search Strategy

Scopus was used as the single source. The choice reflects its coverage of the tourism, sustainability and geoscience journals in which this literature concentrates, its consistent metadata for bibliometric processing, and its indexing of the regional journals that carry much of the Global South evidence. The search was executed on 8 September 2026 and combined three concept blocks with Boolean operators: an educational block (education, educational tourism, environmental education, interpretation, learning, curriculum, training), a tourism block (tourism, ecotourism, sustainable tourism, geotourism, heritage tourism, destination), and a sustainability block (sustainability, sustainable development, conservation, SDG). Results were limited to journal articles in final or article-in-press publication stage, published between 2021 and 2026. The search returned 203 records, exported in CSV and RIS formats with full abstracts and author keywords.

Eligibility Criteria

Studies were eligible if they met all of the following. They had to be peer-reviewed journal articles reporting original empirical work, a systematic review, or a developed conceptual framework. They had to address a tourism context, defined as tourism, ecotourism, geotourism, heritage tourism, a protected area with visitor management, or a destination. They had to contain an explicit sustainability construct rather than a passing invocation of the word. And they had to treat an educational or interpretive function as a substantive object of the study rather than as incidental background.

The substantive-object requirement was operationalised to keep screening reproducible. An educational function counted as substantive if educational terminology appeared in the title, appeared among the author keywords, or appeared at least twice in the abstract. The same rule was applied to sustainability constructs. Studies failing either rule were excluded at the corresponding stage.

Exclusions covered conference papers, book chapters, editorials, records without a retrievable substantive abstract, and studies in which tourism appeared only as an application example of a method developed for another purpose.

Selection Process

Figure 1 presents the PRISMA flow. The Scopus search identified 203 records. Deduplication on DOI and title removed none, indicating a clean export. All 203 records were screened on title, abstract and author keywords against the sustainability criterion, and 21 were excluded because sustainability appeared only as a passing reference. The remaining 182 records were assessed against the full eligibility criteria; 51 were excluded because an educational or interpretive element was present in the text but incidental to the study argument. This left 131 studies for synthesis.

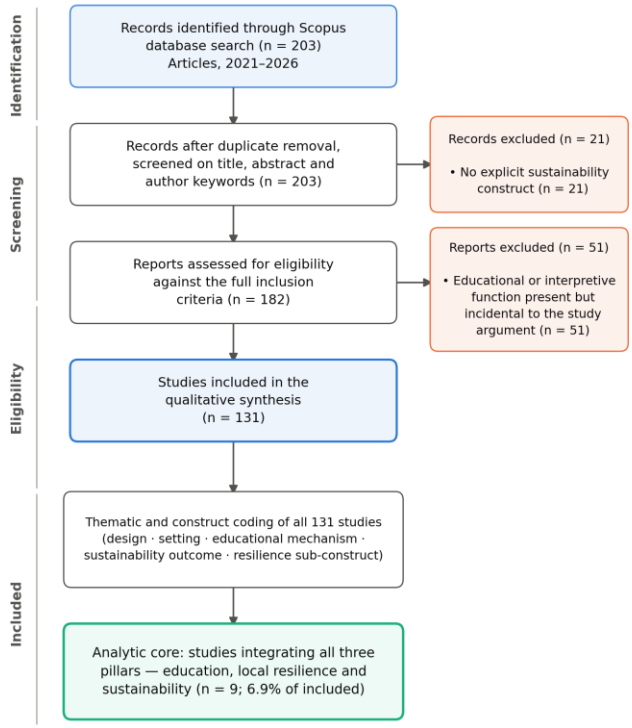

Figure 1. PRISMA 2020 flow diagram for the review. Screening applied the sustainability criterion first, then the educational-function criterion, leaving 131 studies for synthesis and an analytic core of nine

Within the included set, a further analytic distinction was drawn. Studies meeting the resilience criterion, defined by the same title–keyword–abstract rule applied to a resilience lexicon, formed the analytic core of nine studies that integrate all three constructs.

Data extraction and coding

Each of the 131 included studies was coded on five dimensions using a dictionary-based protocol applied to the concatenated title, abstract and author keyword text.

Study design distinguished quantitative survey and structural equation modelling, qualitative and case study work, mixed methods, review and bibliometric studies, spatial and modelling approaches, and economic valuation. Categories are non-exclusive, since studies frequently combine approaches.

Geographic setting was coded to seven regions, with Indonesia separated from the rest of Asia because it accounts for the largest single national presence in the corpus. Studies naming no specific setting, typically reviews and conceptual pieces, were recorded as such.

Educational mechanism distinguished heritage and environmental interpretation, formal curriculum and higher education, community training and capacity building, awareness and attitude change, and digital or technology-mediated learning.

Sustainability outcome distinguished environmental and conservation outcomes, economic and livelihood outcomes, sociocultural continuity, and governance and institutional arrangements.

Resilience sub-construct was coded against eight categories: explicit resilience framing, adaptive capacity, social capital and collective action, local wisdom and indigenous

knowledge, disaster and risk reduction, shock, crisis and recovery dynamics, livelihood diversification, and longitudinal or temporal design.

Dictionary terms for each category were specified in advance. Coded output was checked against a random sample of 30 studies read in full; agreement between dictionary assignment and manual reading was 90% (27 of 30), with the three discrepancies all involving studies where educational language appeared in a methods description rather than as a study focus. These were reviewed individually and reclassified.

Bibliometric procedure

Author keywords from the corpus were analysed for co-occurrence in VOSviewer using full counting, with a minimum occurrence threshold of three and manual harmonisation of variants such as ecotourism and eco-tourism, geopark and geoparks (Effendi et al., 2025). The resulting network was clustered using VOSviewer's modularity-based algorithm at default resolution. The map is presented as Figure 4 and interpreted in Section 4.2.

Quality appraisal

Formal risk-of-bias instruments developed for clinical research do not transfer well to a corpus of this composition. Quality was assessed through three proxies applied at corpus level rather than study level: peer-reviewed indexing in Scopus as a minimum threshold, journal concentration as an indicator of disciplinary coherence, and citation distribution as an indicator of scholarly uptake. The included studies appeared in 61 distinct journals, with *Sustainability* accounting for 38 and the *GeoJournal of Tourism and Geosites* for 12. Citation counts ranged from 0 to 114 (median 4, mean 10.5), with 35 studies uncited, a distribution consistent with a corpus weighted toward recent publication. All 131 studies were open access, which supports verification of the synthesis.

RESULTS AND DISCUSSION

Descriptive characteristics

Publication output rose steeply across the review window. The included set contains 10 studies from 2021, 12 from 2022, 14 from 2023, 24 from 2024, 41 from 2025 and 30 from a partial 2026, so more than half the literature (54.2%) appeared in the final two years (Figure 2a). Growth of this shape usually indicates a field consolidating around a set of shared questions.

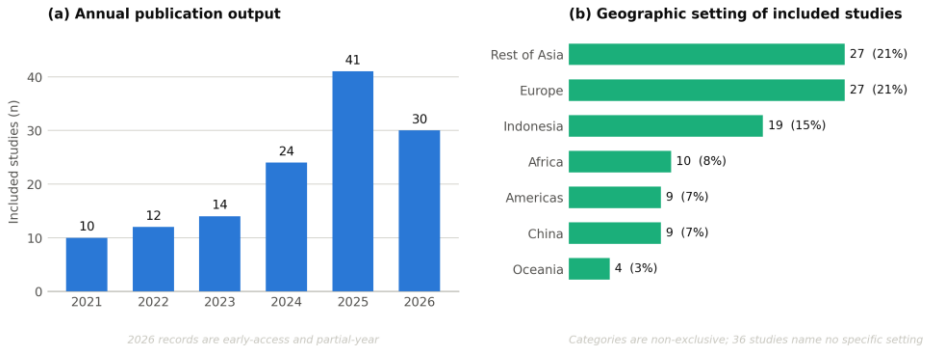

Figure 2. Descriptive profile of the 131 included studies: (a) annual publication output; (b) geographic setting. Geographic categories are non-exclusive and 36 studies name no specific setting

Geographic coverage was broader than the tourism literature's usual European and North American concentration (Figure 2b). Asia excluding Indonesia and Europe each accounted for 27 studies (20.6%), Indonesia for 19 (14.5%), Africa for 10 (7.6%), the Americas and China for nine each (6.9%), and Oceania for four (3.1%). Thirty-six studies, mostly reviews and conceptual pieces, named no specific setting.

Methodologically the corpus divides almost evenly between qualitative and case study work (51 studies, 38.9%) and quantitative survey or structural equation modelling (48 studies, 36.6%). Review and bibliometric studies and spatial or modelling approaches account for 13 studies each (9.9%), mixed methods for 10 (7.6%) and economic valuation for five (3.8%). What matters for this review is not the balance between these categories but a property they share: with six exceptions (4.6%), every study observes its subjects at a single point in time.

Intellectual structure of the field

The keyword co-occurrence map (Figure 4) resolves into four clusters, and the composition of each is as informative as the clustering itself.

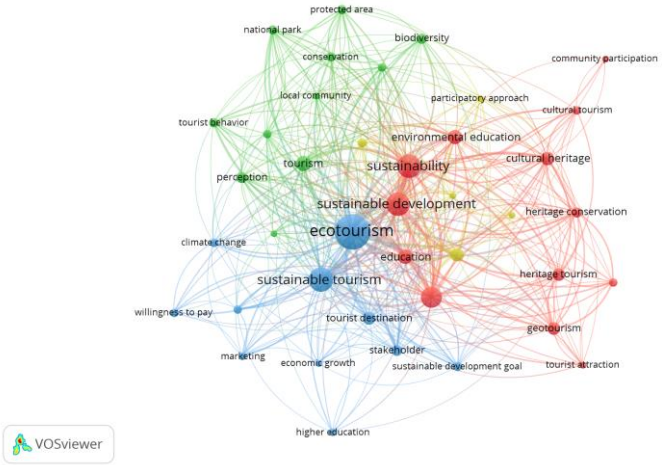

Figure 3. Author keyword co-occurrence network for the corpus (VOSviewer, minimum occurrence = 3). Four clusters emerge: sustainable tourism and destination economics (blue), conservation and protected areas (green), heritage, culture and environmental education (red), and a participatory bridge (yellow). No resilience term meets the occurrence threshold

The blue cluster centres on ecotourism and sustainable tourism as the field's organising terms, joined by tourist destination, stakeholder, economic growth, marketing, willingness to pay, climate change and sustainable development goal. This is the field's commercial and policy core, concerned with how destinations are positioned, valued and governed.

The green cluster gathers conservation, biodiversity, protected area, national park, local community, tourist behaviour and perception. Its concerns are ecological, and its unit of analysis is usually the site rather than the community, with local communities appearing as a stakeholder among others.

The red cluster covers cultural heritage, heritage tourism, heritage conservation, cultural tourism, geotourism, environmental education, tourist attraction and community participation. Environmental education sits inside this cluster rather than forming a cluster of its own, which is worth noting: education is treated as an instrument of heritage and conservation management rather than as an independent research object.

The small yellow cluster, containing participatory approach and a few associated terms, occupies the space between the green and red clusters and functions as a bridge. Participation is where community involvement enters the map.

Two absences in this structure carry more weight than any of the clusters. Resilience does not appear as a node anywhere in the map. Neither does adaptive capacity, social capital, local wisdom, disaster mitigation or livelihood. These terms fall below the minimum occurrence threshold of three, which means that across 203 articles no resilience concept was used often enough by authors as a keyword to enter the network. The second absence is educational tourism itself, which appears only through environmental education embedded in the heritage cluster. The field, on its own account of what it studies, has neither a resilience vocabulary nor a self-standing educational tourism vocabulary.

Educational mechanisms

Coding of educational mechanisms (Figure 3) reveals a pronounced skew toward the visitor.

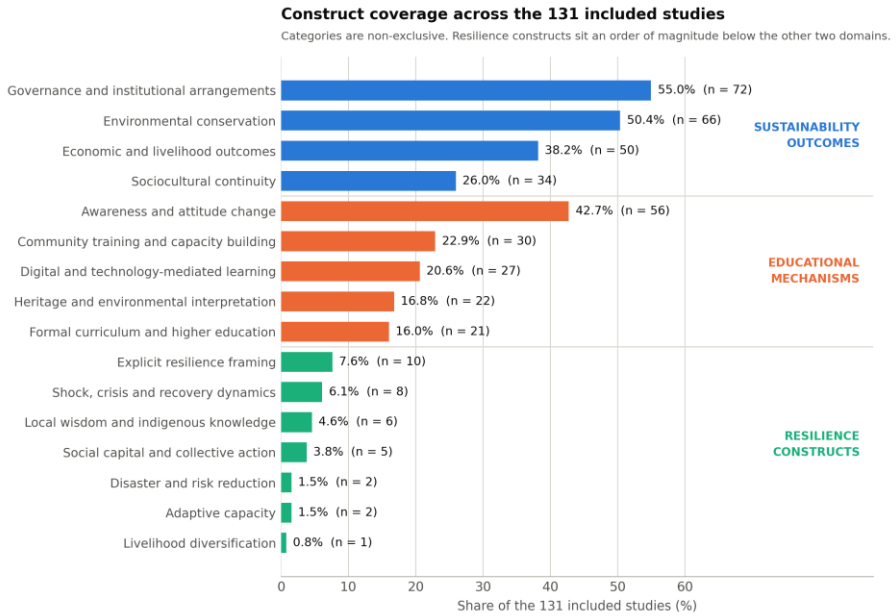

Figure 4. Construct coverage across the 131 included studies. Resilience constructs sit an order of magnitude below educational mechanisms and sustainability outcomes on every measure

Awareness and attitude change was the dominant mechanism, present in 56 studies (42.7%). This work measures what tourists know, feel and intend, usually through survey instruments administered on site, and connects those measures to behavioural intention. Wang et al. (2024), Fu and Zhao (2024), Janchai and Suvittawat (2025) and Tello Chan et al. (2026) are representative.

Community training and capacity building appeared in 30 studies (22.9%), digital and technology-mediated learning in 27 (20.6%), heritage and environmental interpretation in 22 (16.8%), and formal curriculum and higher education in 21 (16.0%).

The ordering matters. The mechanism that acts on visitors is roughly twice as well represented as the mechanism that acts on residents, and the two mechanisms most likely to accumulate durable community capacity, training and curriculum work, sit at the bottom. Where training is studied, it is often studied well: Rocha et al. (2022) demonstrate measurable improvement in guiding practice after a training intervention in Mozambique, and Pimentel

and Silva (2026) survey 51 certified geoguides on the professional and territorial effects of a Portuguese geopark programme. But these are exceptions in volume terms.

Digital learning presents a related pattern. Williams et al. (2025) develop a workflow for digital outcrop modelling in geoparks, Zhang and Deng (2024) review the smart technology and ecotourism nexus, and Jiménez-Márquez et al. (2026) co-design an AI-assisted field notebook with a Mexican farming community. The first two treat technology as a delivery channel for content produced elsewhere. Only the third treats it as a means of documenting knowledge the community already holds.

Sustainability outcomes

Governance and institutional arrangements were the most frequently addressed outcome domain, appearing in 72 studies (55.0%), followed by environmental and conservation outcomes in 66 (50.4%), economic and livelihood outcomes in 50 (38.2%) and sociocultural continuity in 34 (26.0%).

The prominence of governance reflects a genuine strength of this literature. Studies such as (Colasante et al., 2024) on mountain tourism stakeholders, Molokáč et al. (2024) on geopark management in Slovakia and Phan et al. (2026) on strategic prioritisation for a Vietnamese UNESCO geopark take institutional arrangements seriously and produce actionable planning guidance.

The weakness lies in what governance is asked to deliver. Across these studies, governance quality is assessed by whether arrangements support sustainable operation under current conditions. Whether the same arrangements could absorb a shock, reorganise, and continue functioning is not examined. Governance is treated as a steady-state property.

The resilience deficit

The coding of resilience sub-constructs produces the review's central finding, and the magnitudes are worth stating plainly.

Explicit resilience framing appeared in 10 of 131 studies (7.6%). Shock, crisis and recovery dynamics appeared in eight (6.1%), a figure inflated by studies that mention COVID-19 as context rather than analysing recovery. Local wisdom and indigenous knowledge appeared in six (4.6%), social capital and collective action in five (3.8%), disaster and risk reduction in two (1.5%), adaptive capacity in two (1.5%) and livelihood diversification in one (0.8%).

Set against educational mechanisms running from 16.0% to 42.7% and sustainability outcomes from 26.0% to 55.0%, the resilience domain sits an order of magnitude lower on every measure.

The temporal pattern is sharper still. Of the 203 articles in the original corpus, not one published between 2021 and 2024 used the word resilience anywhere in its title, abstract or author keywords. All 19 occurrences fall in 2025 and 2026. Two readings are available. The optimistic one is that resilience is entering the field now, prompted by the accumulated experience of pandemic disruption and climate volatility. The cautious one is that the term is being adopted as vocabulary before the construct is adopted as an analytic framework. Our reading of the ten studies supports the cautious interpretation for most of them: in seven, resilience appears once, as a descriptor of a desirable outcome, without an operational definition, a measure or a place in the study's analytic model.

The nine integrating studies

Nine studies met all three criteria (Table 1), and they are heterogeneous enough that they do not constitute a research programme.

Table 1. The nine studies integrating educational tourism, local resilience and sustainability.

Study	Setting	Design	Educational mechanism	Resilience element engaged
Chang et al. (2022)	Taiwan	Survey / PLS-SEM (n = 626)	Awareness and attitude change	Climate change adaptation intention
Yasir et al. (2023)	Indonesia (Riau peatlands)	Qualitative case study	Community training; environmental communication	Fire disaster mitigation; behavioural change in land use
Kitole & Sesabo (2024)	Tanzania (Kilimanjaro)	Quantitative empirical	Awareness; community capacity	Livelihood dynamics and diversification
Hasmira et al. (2025)	Indonesia (West Sumatra)	Mixed methods; 1-year field period	Community training; conservation education	Disaster mitigation; community resilience framing
Marques (2025)	Portugal	Design-based research; 50 dissertations, 2008–2025	Project-based heritage education; teacher training	Community resilience; post-COVID place-based recovery
Manojlović et al. (2025)	Montenegro (two national parks)	Survey; regression and ANOVA	Awareness and attitude change	Resilience listed as construct; not operationalised
Rizka et al. (2025)	Indonesia (Pulo Aceh)	Qualitative descriptive	Entrepreneurship education; curriculum	Local wisdom; youth empowerment; livelihood
Aswita et al. (2026)	Indonesia (Aceh coast)	R&D, Four-D model; sequential mixed methods	Environmental education model; customary institutions as pedagogy	Indigenous knowledge; customary environmental stewardship
Jiménez-Márquez et al. (2026)	Mexico (Oaxaca)	Participatory action research	AI-assisted field notebook; intercultural education	Agroecological knowledge; native maize systems

Marques (2025) presents the HISTOESE model, developed from a longitudinal corpus of 50 master's dissertations in Portugal, in which project-based heritage education generated school–community partnerships supporting post-COVID place-based recovery. This is the closest thing in the corpus to the mechanism described in Section 2.3, though tourism enters it indirectly.

(Aswita et al., 2026) develop and validate an ethno-ecotourism environmental education model in Aceh, Indonesia, using Acehnese customary institutions as pedagogical mechanisms. Hasmira et al. (2025) construct a disaster mitigation-based ecotourism model in a coastal

Indonesian village, combining ecotourism management, turtle conservation, local entrepreneurship and mitigation strategy over a one-year field period. Rizka et al. (2025) examine the integration of local wisdom into entrepreneurship education for tourism in Pulo Aceh, finding creative activity present in schools but fragmented and outside the formal curriculum.

Yasir et al. (2023) analyse corporate CSR communication in peatland fire mitigation, documenting behavioural change in peatland use. (Bindawas, 2025; Chanda et al., 2023; Chang et al., 2022) model climate change perception and adaptation intention among 626 forest recreation users in Taiwan. Kitole and Sesabo (2024) study livelihood dynamics in communities around Mount Kilimanjaro National Park. Manojlović et al. (2025) survey resident attitudes toward sustainable tourism in two Montenegrin national parks, listing resilience among their keywords. Jiménez-Márquez et al. (2026) conduct participatory action research in Oaxaca, Mexico, co-designing an AI-assisted field notebook around native maize cultivation.

Four features distinguish this group. Five of the nine are Indonesian or Latin American, which suggests that the integration is being attempted first where communities are most exposed to disruption. Six use qualitative or mixed designs, consistent with early-stage work on a construct that has not been operationalised for measurement. Eight are 2025 or 2026 publications. And none of the nine measures resilience as an outcome: resilience is framed as context, as motivation, or as a hoped-for consequence, but never as a variable the study estimates.

Six Research Gaps

Applying a six-type gap taxonomy to the coded corpus yields the structure summarised in Table 2. Gap strength was rated high where the gap is explicit in two or more studies' stated limitations or where no included study addresses it, medium where it is implied by the pattern of findings, and low where it rests on our inference from the corpus.

Table 2. Six research gaps identified across the 131 included studies.

Gap type	Description	Supporting evidence from the corpus	Strength
Conceptual / theoretical	No study specifies or tests a mechanism linking educational tourism to community resilience; the nine integrating studies place the constructs side by side without theorising the link.	0 of 131 studies propose a testable model; resilience absent from the keyword co-occurrence network	High (3)
Outcome	Resilience is never measured. Outcome variables are satisfaction, intention, behaviour, revenue, conservation status and governance quality.	Adaptive capacity 2 (1.5%); social capital 5 (3.8%); livelihood diversification 1 (0.8%) — all as context, none as measured outcome	High (3)

Gap type	Description	Supporting evidence from the corpus	Strength
Methodological	The corpus is overwhelmingly cross-sectional, which cannot observe behaviour over time or under disturbance.	125 of 131 studies (95.4%) single-point observation; Meschini et al. (2021) the principal exception	High (3)
Population	The dominant learner is the adult visitor; residents appear as survey respondents rather than as learners, and intergenerational transmission is nearly absent.	Awareness mechanisms 56 (42.7%) vs. training 30 (22.9%) and curriculum 21 (16.0%); exceptions Kurniawan et al. (2026), Rizka et al. (2025)	Medium (2)
Temporal	No study tracks a destination through a disturbance and out the other side, despite the pandemic offering a natural experiment.	Post-COVID recovery mentioned in 8 studies (6.1%), analysed in none; longitudinal design 6 (4.6%)	Medium (2)
Geographical	Coverage is broad, but resilience-engaging work clusters in Southeast Asia and Latin America while European work concentrates on interpretation and curriculum; no comparative design treats this variation as a research question.	5 of 9 integrating studies Indonesian or Latin American; 0 cross-regional comparative designs	Low–Medium (1–2)

Conceptual gap (high).

No study in the corpus specifies a mechanism connecting educational tourism to community resilience, and none proposes a testable model of that connection. The nine integrating studies place the constructs alongside each other without theorising the link. The consequence is that the field cannot say whether education builds resilience, resilience enables education, or a third factor produces both.

Outcome gap (high).

Resilience is never measured. Across 131 studies the outcome variables are satisfaction, intention, behaviour, revenue, conservation status and governance quality. Adaptive capacity, recovery time, livelihood diversity and social capital density do not appear as measured outcomes anywhere. A field cannot claim to build resilience while measuring only performance.

Methodological gap (high).

With six exceptions (4.6%), the corpus is cross-sectional. Resilience is definitionally about behaviour over time and under disturbance, and cross-sectional data cannot observe either. Meschini et al. (2021), with their three-year follow-up on citizen science participants, show what longitudinal work can contribute and how rare it is.

Population gap (medium).

The dominant learner is the adult visitor. Residents appear as respondents in attitude surveys rather than as learners in their own right, and the intergenerational transmission that

keeps local knowledge alive is almost absent. Kurniawan et al. (2026) on Gendang Beleq in Lombok and Rizka et al. (2025) on entrepreneurship education in Pulo Aceh are the clearest exceptions.

Temporal gap (medium).

The corpus itself is recent, so the gap is not one of stale data. It is that no study tracks a destination through a disturbance and out the other side. Post-COVID recovery is mentioned in eight studies and analysed in none, despite the pandemic providing the field with a natural experiment it will not get again.

Geographical gap (low to medium).

Coverage is more balanced than in most tourism reviews, so the crude geographical gap is modest. The finer gap concerns the pairing of setting and construct: resilience-engaging studies cluster in Southeast Asia and Latin America, while European work concentrates on interpretation and curriculum. What is missing is comparative work that treats this variation as a research design rather than an artefact.

The Resilience-Based Edu-Tourism framework

The gaps above are related, and their relation suggests what a corrective framework would need to specify. We propose the Resilience-Based Edu-Tourism (RBET) framework as a first statement of that specification. It has three propositions.

Local knowledge as pedagogical content.

In RBET, what is taught is what the community knows about managing its own environment: seasonal patterns, hazard signals, resource limits, customary rules and the practices that encode them. This inverts the standard arrangement, in which content is developed by external experts and delivered to residents and visitors alike. Aswita et al. (2026) demonstrate the inversion by treating Acehnese customary institutions as the pedagogical mechanism rather than as the subject matter. The proposition has an empirical implication: educational products built on locally held knowledge should be harder for competitors to replicate and more resistant to obsolescence than products built on generic environmental content.

Community learning as the mechanism of adaptive capacity.

In RBET, the primary learner is the resident. Training that qualifies community members to interpret their own territory produces a transferable skill, a diversified income stream and a strengthened institutional memory, which are three of the four standard components of community resilience. The visitor's learning is a by-product and a revenue source rather than the objective. Pimentel and Silva (2026) show the mechanism at work: certified geoguides reported effects on their professional activity and on local networking that extend well beyond the tourism transaction.

Sustainability as emergent rather than targeted.

In RBET, sustainability outcomes follow from the first two propositions instead of being specified as independent targets. A community that has diversified income, retained its environmental knowledge and strengthened its collective capacity will produce conservation and livelihood outcomes as a consequence, and will retain them under disturbance. This proposition is the sharpest departure from current practice, where sustainability indicators are set first and educational programmes are designed to move them.

The three propositions are ordered as a causal chain, and each link is testable with methods already in routine use in this field.

Theoretical implications

The absence documented here is not adequately explained as neglect. It follows from how the field has constituted its object of study.

Tourism research inherited its dominant unit of analysis from marketing and service management, where the object is a transaction between a provider and a customer. Educational tourism research adopted this unit and asked what the customer learns. Resilience research works with an entirely different unit, the community as a system persisting through time, and asks what the system can absorb. These are not competing answers to one question; they are answers to different questions, formulated within traditions that have had little occasion to meet. The keyword map in Figure 4 shows the consequence with unusual clarity: the field's own vocabulary contains no term through which the two could be connected.

This has a consequence for sustainable tourism theory more broadly. If sustainability is operationalised as steady-state performance, as it is throughout this corpus, then any destination that scores well is judged sustainable regardless of its exposure to disturbance. That is a weak test, and the pandemic demonstrated how weak. Adding a resilience dimension changes the evaluative standard from "can this continue" to "can this recover", and the two questions have different answers for most destinations.

Practical and policy implications

For destination managers, the practical implication is a reordering of educational investment. Current practice, as this corpus reflects it, allocates most educational effort to visitor-facing interpretation and awareness. The RBET framework suggests the higher return lies in resident-facing training and curriculum work, on the grounds that a trained resident retains the capability after the season ends while an informed visitor departs with it.

For education policy, the implication concerns curriculum. Six studies in the corpus engaged local wisdom, and Rizka et al. (2025) show why so few is a problem: the entrepreneurial and environmental knowledge in their Indonesian case existed in schools but sat outside the formal curriculum, which left it dependent on individual teachers. Embedding local environmental knowledge in formal curricula, as Aswita et al. (2026) attempt, converts it from personal enthusiasm into institutional memory.

For funders and evaluators, the implication is a change in metrics. Programmes are currently evaluated on visitor numbers, satisfaction scores and short-term behavioural indicators. None of these detects whether a programme has increased a community's capacity to withstand disruption. Adding measures of livelihood diversity, skill retention and network density would require modest additional data collection and would tell funders something their current instruments cannot.

Research questions arising

Three questions follow directly from the gaps and the framework.

RQ1. Does educational tourism built on locally held environmental knowledge produce greater community adaptive capacity than educational tourism built on externally developed content, and through which mechanisms? This addresses the conceptual and outcome gaps. A comparative case design across destinations differing in content origin, with adaptive capacity measured through validated community resilience instruments, would test it.

RQ2. Do the educational gains reported in cross-sectional studies persist, and do they survive disturbance? This addresses the methodological and temporal gaps. A longitudinal panel following residents and visitors across at least three waves, with a disturbance event as a natural experiment where one occurs, is the appropriate design. Meschini et al. (2021) provide a template at smaller scale.

RQ3. Which educational mechanisms most efficiently convert into resilience components, and does the ranking vary by hazard profile and community structure? This addresses the population and geographical gaps. A multi-site comparative design spanning contrasting hazard exposures, with mechanism type as the independent variable and resilience components as outcomes, would allow the ranking to be estimated.

CONCLUSION

This review aimed to determine whether sustainable tourism research has connected educational tourism with local resilience. The findings indicated that this connection remained limited. Among 131 studies combining an educational function with an explicit sustainability construct, only nine integrated all three dimensions. Adaptive capacity was identified in two studies, livelihood diversification appeared in one study, and no article published before 2025 explicitly used the term resilience. Furthermore, resilience-related concepts were absent from the field's keyword co-occurrence structure, indicating a conceptual gap rather than merely a lack of research emphasis.

The identified absence followed a consistent pattern. Educational efforts primarily focused on visitors rather than residents, outcomes were commonly assessed through current performance indicators rather than recovery capacity, and 95.4% of studies examined subjects at only a single time point. These characteristics limited the ability of existing research to capture the development of community resilience over time and constrained theoretical understanding of how educational tourism contributes to adaptive capacity.

The Resilience-Based Edu-Tourism (RBET) framework proposed in this review addressed this missing connection by conceptualizing a relationship in which local knowledge provides educational content, community learning strengthens adaptive capacity, and sustainability outcomes develop through enhanced resilience capacity. Each component can be examined using established research methods, and the three research questions presented in Section 5.5 provided directions for future empirical investigation.

The implications extend beyond a simple research gap. Destinations that demonstrate strong sustainability performance under normal conditions may remain vulnerable to external disturbances because conventional indicators often measure existing performance rather than recovery capacity. The findings suggested that integrating resilience perspectives into educational tourism research is necessary to develop a more comprehensive understanding of sustainable destination development. Future studies should further investigate how educational tourism initiatives can strengthen local adaptive capacity and support long-term sustainability.

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