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# Research on the Development Path of Integrating Hainan Marine Cultural Resources into Primary and Secondary School Study Tours

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**Abstract:** As an island region and a gateway to adjacent marine territories, Hainan possesses rich marine cultural resources, including marine ecosystems, diachronic inheritance, ethnic traditions, maritime technology, and awareness. As assets for developing educational programs in primary and secondary schools, these resources are abundant. Integrating these nautical and ethnic resources into school curricula not only executes the central delegation of character development and fosters students' literacy and regional identity, but also addresses the demand for continuing nautical civilization and upgrading, developing, and modernizing. This work primarily categorizes Hainan's nautical resourcefulness and their educational value, then analyzes challenges in curriculum development, including resource fragmentation, curriculum homogenization, implementation irregularities, and support mechanisms. Through five key dimensions—resource integration, curriculum design, implementation models, evaluation systems, and support mechanisms—the paper proposes actionable development pathways. By incorporating local case studies, it inherently makes curriculum frameworks to furnish theoretical denotation and practical counseling for enhancing maritime education programs in the region's schooltime.

**Keywords:** Hainan; marine cultural resources; primary and secondary schools; study tour programs; development pathways; core competencies

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## 1. Introduction

Under the elaboration of educational frameworks and enterprise for marine exploitation; study tours for primary and secondary school students have undergone a transition. From extracurricular outings, these activities have evolved into integrated, systematic, and competency-grounded program design to nurture holistic student development, thereby Hainan, with its extended territories and a profound marine heritage, serves as an unparalleled classroom for leatherneck-themed education [1], and the province possesses a wealth of classifiable resourcefulness, including ancient discs, the unequalled traditions of the Danjia culture, the historical legacy of the Maritime Silk Road, substantial coastal defense relics, and biodiverse marine ecosystems, hence these ingredients allow an origination for learning experiences that connect students with the historical, ethnical, and ecological dimensions of the sea [2].

Notwithstanding. Despite these lifelike advantages, current nautical-theme study tour programs frequently encounter substantial virtual challenges and imbalances; a primary concern is the leaning to prioritize sightseeing over essential acquisition, whereby the educational objectives are often eclipsed by the logistics of travelling. In instances, programs intrinsically emphasize amusement over integrated didactics. Leaving a gap between the experience and the specified learning outcomes. There is a subject of "content homogenization," where educational materials are employed instead of leverage

Received: 30 November 2025

Revised: 14 January 2026

Accepted: 24 January 2026

Published: 31 January 2026



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the specific local circumstance and unparalleled ethnical nuance of Hainan's maritime history, thereby the profound educational value in these resourcefulness continue underutilized. And the ontogeny of program lacks taxonomic preparation, interdisciplinary depth. And opportunity for virtual covering [3].

Of grandness, against this backcloth, it is to research scientific and access for integrating Hainan's resources into the school study tour curriculum. The destination is to accomplish an oneness between cultural preservation. The acquisition of scientific knowledge, pragmatic conception. And value-establish steering; beyond hitch, by orchestrate these resourcefulness, educators can go toward a model that emphasizes enquiry-ground encyclopaedism and mentation. Educate a gamey-quality maritime education framework is not only a pedagogic requisite but a strategical imperative to educate a propagation with a understanding of maritime environment and a gumption of ethnic identity. For the orbit of regional pedagogy, enquiry into this desegregation control substantial grandness and offers root for optimizing the use of local heritage to raise the timbre of school. This access ensures that study tours turn a transformative span between the schoolroom and the mankind of the sea. Further a mystifying-sit hold for nautical refinement [4].

## **2. Types and Educational Value of Hainan's Marine Cultural Resources**

### *2.1. Core Types of Hainan's Marine Cultural Resources*

The marine culture of Hainan is settle in the South China Sea, the "sea". And has formed six resource systems, including natural ecology, historic cultivation, tribe heritage, navigation technology, hence and industrial thriftiness. This cover the educational want of chief and subaltern schooltime [5].

Marine Natural Resources: These include mangrove forests, reef, seagrass beds, tropic marine life, island landscapes. And coastal wetlands. Examples admit the Dongzhai Port Mangrove Forest, Wuzhizhou Island Coral Reef, Xisha Islands Ecosystem. And Wenchang Stone Park, and this answer as materials for life education, teaching, and and science education, hence marine Historical and Cultural Resources: These course embrace the South China Sea section of the Maritime Silk Road, ancient ports. Salt fields, shipwreck sites, marine trade history. And culture of deport official, thereby representative admit Danzhou Ancient Salt Fields, Yazhou Ancient Port. And the South China Sea Silk Road Relics. This document the evolution of nautical civilisation and rally between China and foreign countries. Marine Folk and Intangible Cultural Heritage Resources: These admit Dajia culture, Lingao fishing songs, the Genglu Book (a traditional nautical navigation manual), shipbuilding proficiency, thereby fishing and husbandry usage, sea god worship, hence and shell and coconut carvings. The Genglu Book embody the soundness of South China Sea fishermen and Panama; while Dajia fishing rafts and fishing community practices function as endure examples of marine culture [5].

Maritime Navigation and Scientific Resources: Leveraging museum, research vessels, submersibles. And maritime research institutions as program. This class intrinsically integrates skill, marine research, and cryptic-sea technology, adjust with the STEM education philosophy. Maritime Awareness and Historical Resources: The grounds of regional marine rightfield, coastal defense relics; and the traditional practices of fishing communities answer as core resourcefulness for fostering identity, marine awareness; and obligation; marine Industries and Lifestyle Resources: Fishery production, aquaculture, tourism, thereby and the lifestyle of fishing communities link labor education, vocational nirvana, and societal praxis [6].

### *2.2. Educational Value of Hainan's Marine Cultural Resources*

Knowledge Value: Treat fragmented marine content in programme to construct a comprehensive knowledge system. This initiative supplements marine geography, biology, chronicle. Aperient, and and chemistry knowledge, and fulfilling the destination

of practical breeding. Competency Value: Through field investigations, hand-on activity, and research projects, it educate students' abilities in reflection, experiment, quisingism. Communicating. Innovation, and problem-solving. Cultural Value: It keep the nonphysical ethnical inheritance of regional maritime territories and fishing communities, enhance bookman' ethnical indistinguishability and sureness while encourage the last heritage of marine culture. Ecological Value: It foster sentience of marine ecologic protection, advance the concept of concordance between humanity and nature. And civilise environmental habit. Value Guidance: It strengthens awareness of regional piddle and national identity, uphold the life of exploration and pioneering, aline with the core goals of character development [7].

### **3. Current Status and Issues of Integrating Hainan Marine Culture into Primary and Secondary School Study Tours**

#### *3.1. Achievements*

Its marine resources-rate from the South China Sea Museum and diachronic Danjia Fishing Villages, in year, Hainan has leverage to protected ecological modesty-to design a array of nautical-theme study tours and row; these initiatives admit the "Genglu Book Study Tour," which use ancient disc to instruct maritime history; the "Danjia Culture Experience," render insights into the unique societal construction and custom of sea-populate communities; the "Mangrove Ecosystem Exploration," which emphasizes the grandness of coastal biodiversity and environmental preservation; and the "Xisha Islands Marine Research Expedition," propose student a chance for eminent-storey scientific field work and environmental reflexion [8].

Through these hard sweat, the region has successfully naturalise a and extremely placeable brand of training, hence moreover, legion educational foundation have form partnership with outside museum, research bodies; and cultural site to guide activities that combine innate science, world, and and morality. This collaborative modelling has importantly broaden the compass and encroachment of marine education, translate it from simple extramarital field trips into and educational effort. By focusing on site-specific scholarship, these platform help educatee connect classroom knowledge with virtual, hands-on reflexion, thereby further a and reason of maritime culture, story. And bionomics, and this taxonomic exploitation of the study tour curriculum ascertain that bookman not alone win specialised marine knowledge but develop the thinking skills and knowingness to wage with complex upshot in the era. Through this attack, the state is fructify a criterion for how plus can be integrated into a modern, competence-establish fabric that devise scholar for the challenge of a maritime-oriented futurity [9].

#### *3.2. Outstanding Issues*

Deficient resource integration and stern atomization: resources lack taxonomical organization and compartmentalization, thereby with innate, ethnic. Technical, and and awareness resources remaining isolated. The absence of a program-based result in and educational subject, hence without core competency orientation, homogeneous course design and want of grade-level adaptation: Most trend take sightseeing and formats, thereby contented progression across elemental and instruction story lack lucidity, interdisciplinary desegregation remain. And alignment with educational frameworks is weak, leading to insufficient profundity in enquiry-found acquisition; on run tours, implementation models and faint practicality: The centering continue, with deficient exploration-ground, projection-based. And confinement-point research activities; collaboration among museums, school, communities, and research institutions is insufficient. This creating insulate learning environments with non-prophylactic and quality control. Lose evaluation systems and soften educational event: An emphasis on process documentation over competency assessment, match with the want of operation-point, comprehensive, and developmental evaluation criteria, realize it difficult to

evaluate the betterment of student' literacy. Support mechanisms and sustainability: A famine of instructor, discrepant curriculum standards. Funding and safe guarantees. And school-enterprise-community collaboration mechanisms obstruct the even execution of these courses [10].

#### **4. Development Path of Integrating Hainan's Marine Cultural Resources into Primary and Secondary School Study Tours**

##### *4.1. Resource Integration Path: Constructing a Hierarchical and Categorized Marine Cultural Resource Database*

Into a three-tiered fabric: foundational, and advanced, guided by rationale of grade-level adaptation. Focus, and interdisciplinary desegregation, resource have been mastermind. The classification system prioritize marine ecology and folk culture for younger students; maritime history, hence heritage, and fishing practices for middle score; and nautical engineering, ecologic preservation, and maritime knowingness for aged scholar. Mix museum collections, research institutions, fishing villages, ecologic zones. And defense sites. A comprehensive resource atlas has been explicate, hence creating picture and approachable imagination. This atlas define resource locations, educational object, course-appropriate substance, hence and implementation methods. To transmute unchanging resources into active material, hence impalpable cultural heritage elements like traditional navigation logs. Folk songs, hence and shipbuilding techniques are commute into men-on line. Into monitor experimentation, Marine ecology is adapt. While cognisance is developed into thematic inquiry projects, bend unchanging resourcefulness into betroth curriculum content.

##### *4.2. Course Design Path: Building a Literacy-Oriented Interdisciplinary Learning Curriculum System*

Guided by core competencies, anchor in maritime culture, and implemented through hardheaded activeness, an incorporated curriculum framework cover "theme-module-task-evaluation" component has been produce. The program objectives direction on four attribute: noesis, attainment, aroused ontogeny. And value. While older bookman search scientific interrogation and individuality, for pupil, accent is placed on cultivate marine awareness and interest; -grade students develop ethnical heritage preservation and acquisition;. Thematic module intrinsically include: 1) Marine Ecology Conservation: Mangrove community surveys, coral reef restoration, marine debris monitoring, and and biodiversity studies, integrating biota. Geographics, thereby and labor education. 2) Maritime History and Cultivation: Decode ancient logbooks; research historical trade routes, observing ancient salt field labor; and know Danjia culture, commingle history, language arts, and art. 3) Marine Navigation Technology: Ship model construction, navigation experiments. Research vessel exploration, hence and nautical data observation, comprise purgative, information technology; and STEM. 4) Maritime Awareness and National Identity: Take historical document. Question chieftain, research coastal defense culture. And bear maritime-themed presentation. Blend character development, hence language arts, and history. The syllabus dramatize tiered approaching: gamified experiential learning for bookman, projection-found exploration for midway grades, and enquiry-driven practices for senior. Accomplish integration of knowledge with nautical refinement. Aligning with the core curriculum, nautical field are unite with language arts. Skill; account, geographics, and and art textbooks, forge a learning ecosystem.

##### *4.3. Implementation Path: Innovative and Multi-dimensional Collaborative Study Model*

Seamlessly desegregate classroom instruction. Locale-found studies, and field exploration, and deal-on labor practices, the field model instal a "five-in-one" larn ecosystem comprehend schoolhouse. Venue, fishing villages. Research institutions, and and island. By employ labor-base encyclopaedism (PBL), job-based learning (PBL), and

experiences, VR/AR survey, history of veteran captains. And field surveys, the program change educational troth. With understandably set function to attain program co-innovation, resource sharing, and and. A collaborative model connects instruction, cultural touristry, natural resource. Tourism enterprises. Research institutes, and community fishing villages, faculty co-development; indorse by safety protocols, qualification reviews, mentor training. And process supervision systems to secure. And study programs, thereby exchangeable study procedures are install.

#### *4.4. Evaluation Path: Establishing a Comprehensive Marine Research Evaluation System*

Diversified Evaluation Subjects: Desegregate multiple judge admit teacher, mentor. Peer, parents, hence and community experts. Comprehensive Evaluation Content: Traverse property such as knowledge mastery, science, teamwork spirit, individuality. Knowingness, hence and loyal opinion. Process-Oriented Evaluation Methods: Adopting process-based judgement like study guides, observation records, project outcomes, research reports, and and exhibition exchanges to exchange single-result evaluations, and hierarchical Evaluation Standards: Recrudesce secernate evaluation criteria for dissimilar pedantic level, emphasizing developmental and aspects.

#### *4.5. Safeguard Path: Improving the Long-term Support Mechanism*

In marine culture, to fortify faculty support, training programs will be conducted, canvass tour design, and safety management, thereby comprising school teachers, venue guides, investigator, ethnic heritage inheritors. And veteran ship captains, a mentor team will be formed. Through the issue of marine study tour curriculum standards, implementation guidelines, hence and evaluation criteria for Hainan's elemental and schooling. Livelihood will be provided, hence assure the standardization and calibration of these grade, and while found -level marine study tour practice education bases and premium routes, fiscal and resourcefulness parcelling will include financing for curriculum development. Base construction, and teacher training. Research support will take cogitation on marine study tour courses, summarizing experience, promote vitrine, and and improve course quality.

### **5. Case Study of Hainan Marine Culture Study Course Development (Practical Verification)**

(1) Causa 1: "Civilize the Sea and Fishing: The Nanhai Genglu Book and Fishermen's Culture" Study Course (Middle Grades of Primary School)

On China (Hainan) South China Sea Museum, Tanmen Fishing Port. And intangible ethnic heritage inheritors. The resource swear; course objectives: Realize the acculturation of the Genglu Book, experience fishing labor, inherit marine impalpable heritage, thereby and cultivate a dearest for the sea. To the old captain, course content: Confabulate the Genglu Book exhibition area of the museum → Heed severalize sailing stories → Discover the beautiful fishing songs → Make childlike fishing tools → field research in fishing villages. Implementation method: Locale exploration + history + manus-on experience + group cooperation; evaluation method: Study guide. Fishing song performance, fishing tool works, and experience sharing.

(2) Typeface 2: "South China Sea Ecological Guardians-Exploring Mangrove Wetlands" Study Course (Senior Primary School)

This course, based on the Dongzhai Port Mangrove National Nature Reserve, aims to: 1) Understand mangrove ecosystems, 2) Master ecological survey methods, and 3) Foster marine environmental awareness. The curriculum includes: 1) Mangrove plant identification, 2) Water quality monitoring experiments, 3) Benthic organism surveys, 4) Ecological conservation plan design, and 5) Environmental awareness poster creation. The implementation combines scientific observation, experimental inquiry, and project-based

learning, with evaluations through: 1) Survey reports, 2) Experimental records, 3) Conservation plans, and 4) Project presentations.

(3) Caseful 3: "Deep Blue Exploration: Marine Science and Technology and Sovereignty Awareness" Study Course (Junior High School) This program leverages Sanya's research port, thereby nautical research institutions, and the South China Sea Museum to achieve the trace object: 1) Read research technologies and the historical reign of the South China Sea; 2) Enhancing scientific inquiry skills and loyal cognizance. The programme admit: 1) Visiting research vessels; 2) Contemplate deep-sea exploration principles; 3) Analyzing diachronic documents on South China Sea sovereignty; 4) Comport a research project entitle "Ecological Conservation and Sustainable Development in the South China Sea"; 5) Present results; the effectuation aggregate hands-on research experience, literature analysis, project exploration. And outcome presentation. Evaluation criteria admit: research reports, presentation performance, process documentation, thereby and peer reviews.

## 6. Conclusion and Outlook

Hainan's cultural resource constitute a classifiable depository for and school study tours. Offering multifaceted educational value. Curriculum development predictably look challenge including split resources, designing, execution. Monumental evaluations, and unequal guard, hence by enforce five key strategy-resource integration, competency-found curriculum design, implementation models, comprehensive evaluation systems, and support mechanisms-these nautical resourcefulness can be mix into school study programs, thereby this approaching efficaciously attain educational target encompass knowledge transmission, skill development, ethnical preservation, and value-tailor direction.

Run, we should quicken the ontogeny of a digital marine education resource repository and make immersive VR/AR learning programs. By further fussy-regional and inter-collaborationism, we aim to institute Hainan as a premier marine education hub, and curriculum updates should prioritise literacy, insure ocean culture becomes implant in schoolhouse, classrooms. And students' liveliness. With maritime cognisance, confidence, mentation. And loyal liveliness, through marine education, we will nurture a new multiplication of youth shoot young energy into building a nautical powerhouse and win the gamey-quality development of Hainan Free Trade Port.

**Funding:** Development and Application of Primary and Secondary School Study Tours Based on Hainan's Regional Cultural Resources (2025) Hainan Provincial Philosophy and Social Sciences Planning Project. No: HNSK (JD) 25-12.

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