

The Design and Practical Research of the "One Core, Three Chains, Three Stages, and Five Levels" Model for the Ecotourism Online Course

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Keywords: Higher Vocational Education, Ecotourism, Curriculum Development, Implementation, Teaching Methods, Outcomes

Abstract: This research aims to provide a comprehensive review and analysis of the construction, implementation, and outcomes of the "Ecotourism" course in higher vocational education. It begins by outlining the background and design philosophy of the "Ecotourism" online course, emphasizing its critical role in enhancing students' ecological literacy, cultivating sustainable development concepts, and advancing the construction of ecological civilization. The research then details the course development process, including the design of teaching content, course characteristics, and the allocation of teaching resources. Building on this, the research offers an in-depth evaluation of the course's effectiveness, demonstrating notable achievements in the establishment of the "one core, three chains" course development ecological framework, the student-centered "three stages, five steps" teaching model, and the creation of an integrated social service team that combines industry, academia, research, and application. In conclusion, the research reflects on the lessons learned during the course's development and presents recommendations for future improvements, aiming to provide valuable insights for the continued development and enhancement of the "Ecotourism" online course.

1. Introduction

China is one of the world's most biodiverse countries, and Yunnan, with its unique geographical location, remarkable biodiversity, and rich ecological culture, plays a pivotal role as a "leader in ecological civilization construction" and is committed to contributing wisdom and strength to the national efforts in advancing ecological civilization. Yunnan Province is renowned for its abundant tourism resources and has long been a popular destination for both domestic and international tourists. During the 14th Five-Year Plan period, Yunnan aims to develop a modern tourism and cultural industry with a target output value of one trillion RMB. To achieve this ambitious goal, major higher education institutions in the province have established tourism management and related programs. However, in the curriculum of these programs, the integration of "ecology" and

"tourism" is still insufficiently addressed. Especially in higher vocational colleges, no institution has yet offered a specialized course in "Ecotourism," and this field remains underdeveloped and in need of further exploration and refinement. In response, the course development team has created an online ecotourism course targeting vocational colleges within the province, which has yielded some positive results and received favorable feedback. This paper aims to analyze the implementation of the "Ecotourism" course development and assess its effectiveness.

2. Overview of the Course Structure

2.1. Course Positioning

The "Ecotourism" course is an extension course within the tourism management program, and is a sub-course of the national-level teaching resource database "Smart Scenic Area Development and Management." The course carries a total of 2 credits and involves 32 class hours. Upon completing the course, learners will acquire a comprehensive knowledge system related to biodiversity conservation and ecotourism, including concepts, principles, standards, practices, and management of ecotourism. Additionally, students will develop a mindset for sustainable development, enhance awareness of protecting the natural environment, and promote sustainable practices, ultimately becoming advocates and practitioners of ecotourism. In terms of practical skills, students will be able to conduct ecotourism resource assessments, plan and design ecotourism projects, and manage ecotourism ventures. Furthermore, they will recognize the importance of environmental conservation, actively participate in ecological civilization building, and strengthen their sense of social responsibility.

2.2. Target Audience

The course serves four main groups, with a primary focus on teachers and students in higher vocational colleges, as well as professionals in tourism scenic area development and management. It also provides supplementary service to the general public.

Professional Student: This includes students enrolled in tourism management, smart scenic area development and management, educational tourism service and management, and related programs at vocational colleges and higher education institutions. Through the course, students will gain the ability to develop and practice ecotourism, cultivating high-quality, interdisciplinary tourism professionals with expertise, practical skills, innovation, and an international perspective. This will help meet the growing talent needs of the ecotourism industry.

Teaching Staff: The course targets instructors at vocational colleges and higher education institutions who teach tourism management, smart scenic area development and management, educational tourism services, and related fields. The focus is on understanding course standards, integrating ideological and political education into the curriculum, developing effective teaching methods, and conducting practical teaching, contributing to the cultivation of talent for the ecotourism sector.

Tourism Professionals: This group includes staff from tourism scenic areas, resorts, educational and science popularization bases, tourism consulting agencies, and cultural and tourism authorities. The course helps them gain skills in identifying ecotourism resource types, evaluating ecotourism projects or their impact, and understanding resource protection and sustainable development, thus contributing to the advancement of the ecotourism industry.

General Public: Using virtual simulation and other methods, the course aims to showcase videos of national ecotourism destinations or natural protected areas, highlighting their conservation, development, and construction. It seeks to promote the image of "Beautiful China" and ecological

civilization, while enhancing public awareness of ecological protection.

3. Course Design

3.1. Design Intent

Guided by the "Two Mountains Theory" and the theory of ecological civilization, the course responds to global trends in ecological protection and sustainable development^[1], aiming to cultivate students' ability to promote and practice the principles of ecotourism within the tourism industry. The course advocates for the protection and promotion of local natural and cultural diversity, using education to encourage the participation and benefit of local communities. Through this course, the public's awareness of the value of ecotourism will be enhanced, contributing to the green transformation of the tourism industry.

3.2. Course Philosophy

The course design integrates three key concepts: sustainable development, ecological protection, and community participation. The concept of sustainable development ensures that tourism activities meet contemporary needs without compromising the ability of future generations to meet their own needs. The ecological protection concept emphasizes the importance of protecting the natural environment during tourism activities and minimizing negative impacts on ecosystems. The community participation concept encourages local communities to be involved in tourism planning and management, ensuring they share in the benefits of tourism development. The integration of these three concepts guarantees a balanced consideration of social, ecological, and economic benefits.

3.3. Course Objectives

The course objectives are categorized into knowledge, skills, and quality goals, Knowledge Goals: Students will master the basic theories and key elements of ecotourism, be able to apply relevant theories to guide tourism activities, and understand the practical application of ecotourism principles. Skill Goals: The course aims to cultivate students' practical operational skills in the field of ecotourism, enhance their decision-making abilities, and equip them with problem-solving skills. Quality Goals: The course seeks to foster students' passion for nature, strengthen their awareness of protecting natural resources, and promote the values of "respecting nature, conforming to nature, and protecting nature" as part of ecological civilization. The goal is to encourage students to contribute to social progress and the protection of the Earth, our shared home.

3.4. Teaching Strategies and Methods

Course Content: The course emphasizes the integration of local culture and regional characteristics. It incorporates knowledge of local history, folklore, traditional crafts, as well as the biodiversity resources of Yunnan, allowing students to understand the uniqueness and value of local culture. The course also highlights the relationship between ecotourism and regional ecological protection.

Learning Methods: The course blends participatory and project-based learning approaches. Participatory Learning Emphasizing community participation, students will engage with local communities to participate in the planning and implementation of community-based ecotourism projects, which will help showcase and preserve local culture. Through simulations of ecotourism

project development, students will take on various roles (e.g., planners, operators, local residents) to understand issues from multiple perspectives. **Project-Based Learning:** Students will be encouraged to develop specific ecotourism projects based on local culture and regional characteristics, such as designing ecotourism routes or environmental education programs. Additionally, students will work on real-world projects in collaboration with local governments and businesses, such as conducting market research or environmental impact assessments for ecotourism.

Support for Local Economic and Social Development: During the course development, platforms such as the "Yunling Forum," the 20th Central Committee's Third Plenary Session theory lectures, and community activities will be used to provide local residents with ecotourism-related skills training, such as guiding services and ecological protection knowledge. This will help enhance local economic self-sufficiency. Furthermore, the course resources will be used to promote local ecotourism products and attract more tourists.

Through these strategies and methods, the "Ecotourism" course aims to achieve an organic integration of local culture, regional characteristics, and support for local economic and social development, contributing to a sustainable tourism development model for the region.

4. Course Content and Features

4.1. Core Course Content

The course is centered around the concept of ecological civilization, integrating the "Two Mountains Theory" (i.e., "Lucid waters and lush mountains are invaluable assets") and ecological protection principles within its ideological and political education framework. It covers ten core modules of ecotourism, offering a rich and comprehensive content structure, which includes: biodiversity and ecological crises, the origin and development of ecotourism, the definition of ecotourism, core standards of ecotourism, ecotourists, ecotourism resources, the ecotourism industry, the ecotourism environment, ecotourism planning and green design, and the system of protected areas and ecotourism^[1].

4.2. Distinctive Modules

In alignment with Yunnan's role as a leader in ecological civilization construction, and based on preliminary research and field studies, the course includes two distinctive modules: "Biodiversity and Ecological Crises" and "Protected Area Systems and Ecotourism." These modules explore the current state of biodiversity in China and Yunnan, and the ecological challenges they face, through case studies such as the protection of the Ailao Mountains and Asian elephants. Various teaching methods, including real-world case analyses, are used to guide students in improving their ability to address practical challenges and propose solutions. These modules not only deepen students' understanding of biodiversity and ecological crises in Yunnan but also encourage them to think critically and practically about how to promote sustainable local economic and social development while protecting the natural environment through the lens of ecotourism.

4.3. Teaching Resources

Textbook Selection: The course textbooks are chosen based on the latest curriculum guidelines, industry standards, and the specific needs and characteristics of the students. The selected materials ensure scientific rigor, relevance, and applicability.

Digital Teaching Resources and Online Course Development: Given that the existing textbooks are primarily aimed at undergraduate and higher-level learners, with a focus on theory and limited

practical applicability, the course leader has guided faculty in developing digital resources that complement the textbooks. These resources include micro-lectures, expert talks, case libraries, etc., to facilitate both teacher-led instruction and independent student learning. The course team is also actively involved in the development of national-level teaching resource databases and has contributed original content (e.g., micro-lectures, animations) to platforms like the Smart Vocational Education platform. This includes offering courses and MOOCs (Massive Open Online Courses) with interactive modules such as discussion forums and Q&A sections to promote student-teacher and peer collaboration^[2].

Digital Textbook Development: Based on feedback from teaching and the evolution of the discipline, the "Ecotourism" course standards have been revised and updated. In line with the digital format, the course content has been reorganized to enhance students' practical skills development.

4.4. Assessment Methods

Given the hybrid nature of the course (online and offline), the assessment method is designed to evaluate both the autonomy and flexibility of online learning as well as the interaction and practical aspects of offline learning^[3]. The overall learning effectiveness is assessed through the following components: Online Learning Assessment (40%): Includes online viewing and reading, interactive discussions, online tests and assignments, and online projects. Offline Learning Assessment (40%): Includes attendance, class participation, field trips and reports, group projects, and final exams.

Ideological and Political Education Assessment (10%): Throughout the course, students' ability to apply the "Two Mountains Theory" and ecological protection principles in case studies is evaluated. This is done through assignments, discussions, and projects, assessing their commitment to ecological civilization values. Comprehensive Evaluation (10%): Includes self-assessment, peer assessments, and other forms of reflective evaluation.

4.5. Course Features

Modularized Teaching: The course systematically explains various dimensions of ecotourism, making it easier for students to understand and master the material.

Integration of Theory and Practice: The course emphasizes the development of practical problem-solving skills, aiming to enhance students' hands-on capabilities.

Focus on Sustainable Development: The course guides students to adopt a correct ecological worldview, helping them contribute to the construction of a beautiful China and the advancement of ecological civilization.

5. Implementation Outcomes and Social Impact

5.1. Formation of a Scientific Course Development Team and the "One Core, Three Chains" Ecological Development Model

A course development ecological chain was established with the "online ecotourism course" as its "core." Through collaborative resource sharing, joint construction, and co-development, the course content was aligned with market demands and the green transformation of the industry. The course development team consisted not only of frontline teachers from the tourism field but also involved experts from various disciplines, including tourism, ecology, management, and international relations, leveraging diverse professional advantages. This multidisciplinary approach enabled a flexible and varied teaching methodology, ensuring that the course content and case studies were enriched with an international perspective. The inclusion of industry mentors brought

real-world project cases and practical solutions, which also provided valuable teaching materials for the team. In addition to forming a structured teaching team for course development, the course team integrated daily teaching, teaching competitions, and educational research into a cohesive system, creating a "virtuous cycle" of the three components. Through this ecological chain approach, the course maximized its impact, improving teaching quality and providing students with enriched, dynamic, and effective learning resources. As a result, the team successfully applied for provincial social science projects, published 13 academic papers, developed one digital textbook, and won awards in teaching competitions. The team also launched two online courses and one university-level research team, achieving the integration of "daily teaching — teaching competitions — teaching research."

5.2. Development of a Student-Centered "Three-Stage, Five-Step" Teaching Model

Building on constructivist teaching theory, the ecotourism course teaching team developed a "Pre-Class — In-Class — Post-Class" three-stage model, with each stage further divided into five steps: "Problem Focus — Activation of Prior Knowledge — Justification of New Knowledge — Application of New Knowledge — Extension Training." The teaching team begins by addressing current issues in the tourism industry, creating immersive learning environments in which students connect new and existing knowledge. Through activities such as research, teacher-student interaction, and group discussions, students are guided to engage in reasoning, analysis, and evaluation, thereby motivating their intrinsic drive to learn. The course includes diversified and personalized teaching designs, incorporating self-directed learning before class, interactive discussions during class, and group discussions after class. Utilizing smart education platforms, the team provides resources such as micro-lectures, educational animations, teaching slides, case studies, and exercises. In total, 60 micro-lectures, 15 animations, 110+ videos, and extensive materials on policy, industry trends, and hot issues are made available to students. Outside class, the teaching team also guides students in participating in academic competitions such as the "Challenge Cup" competition, the Innovation and Entrepreneurship competition, and vocational skill competitions, helping them to enhance their creativity and teamwork skills. As a result, students won three provincial-level guide skill competition awards, two innovation and entrepreneurship competition awards, one "Challenge Cup" award, and initiated one student entrepreneurship incubation project. This has significantly increased students' recognition and pride in their chosen field.

5.3. Creation of an Integrated Industry-Academia-Research-Society Service Team

Leveraging the ecotourism course as a platform, an integrated industry-academia-research-society service team was established^[4]. The teaching team closely linked academic research, industry needs, teaching practice, and community service, integrating theoretical knowledge with practical application to cultivate professionals with international perspectives and specialized skills^[5]. In practice, the team members conducted field research in ecotourism, providing decision-making support to local governments and businesses. For example, the team authored suggestions on "Supporting Yunnan in Creating a Demonstration Province for the Integration of Agriculture, Culture, and Tourism," which were endorsed by the provincial governor and vice governor. Other recommendations, such as "Accelerating the Integration of Agriculture, Culture, and Tourism to Boost Yunnan's Beautiful Rural Development" and "Empowering the High-Quality Development of Yunnan's Cultural and Tourism Industries through Talent Development," were included in proposals for the provincial political consultative conference. The teacher-student team also designed six categories of 76 natural education programs for Yunnan's national parks, which were

implemented in industrial practice. They hosted a nature education experience for Olympic champion Guo Jingjing and her husband, and participated in the 2024 China Outdoor Sports Conference. Through this deep integration of industry, academia, research, and application, the course's development outcomes were translated into tangible productivity, promoting regional sustainable development. This innovative model not only improved educational quality but also injected new vitality into community service, demonstrating the vast potential of industry-academia-research collaboration for social development.

6. Conclusions and Prospects

Through the combination of course development and the integration of online and offline practical teaching, the "Ecotourism" course has been launched in two sessions on the Smart Vocational Education Resource Platform, with 323 enrolled students. It has also been offered on the MOOC platform for two sessions, attracting 201 students from 15 different institutions. Additionally, the course has been made available on the Yunnan Open University undergraduate and diploma education platforms. In response to the unique needs of community learners, the course has been restructured into a set of 22 micro-courses tailored for community learners, which has been launched on the Yunnan Senior (Community) Education Platform, attracting nearly 200 participants. Furthermore, the course has participated in the Ministry of Education's initiative to apply for "Brand Courses for County-Level Community Learning Centers."

Through the implementation of the "One Core, Three Chains" course development ecological chain, the "Three-Stage, Five-Step" teaching model, and the integration of an industry-academia-research-society service team, the course has achieved notable success. However, there are still several challenges that need to be addressed:

1) Refinement and Promotion of Ecotourism Practices: Yunnan is rich in biodiversity resources, and there is a need to further refine, categorize, and promote practical ecotourism cases based on this wealth of resources.

2) Expansion of Micro-Courses and Case Study Locations: The filming locations for micro-courses and case studies can be expanded to include related protected areas and tourist sites where practical activities are conducted. This will present new challenges for both the filming and recording teams.

3) Expansion of Course Reach: There is a need to broaden the course's applicability by including diverse groups, such as elderly university students and local community residents, to enhance the course's accessibility and its educational value for public awareness.

Through this diversified participation, the course will be better positioned to serve various social strata, thereby improving public awareness and participation in ecotourism.

Acknowledgements

Yunnan Provincial Philosophy and Social Science Planning Project, "Research on the Realization Path of Ecological Civilization Education Function in China's National Parks" (YB2023084).

Yunnan Open University School-Level Special Scientific Research Fund Project, "Research on the Integration and Symbiotic Mechanism of Open Education and Vocational Education Talent Cultivation Systems" (Project No: 23YNOUZ54).

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