

tures on contour maps.

3. Analysis of Students' Learning Background

The teaching target for this section is seventh-grade students, who are curious about geography but relatively lack geographical knowledge and spatial abilities. Furthermore, in traditional geography teaching models, teachers struggle to cater to the diverse cognitive development levels of individual students. Therefore, the practical application of VR in geography teaching for this section can start from geographical phenomena around students, using VR technology to visually demonstrate different mountain features and how three-dimensional mountains are converted into two-dimensional contour maps, reducing the difficulty of geographical knowledge and improving students' cognitive structure.

4. Core Literacy Objectives

The geography core literacy objectives for this section are as follows: (1) **Regional Cognition**: Recognize different mountain features on contour maps using VR virtual scenarios, such as peaks, ridges, valleys, cliffs, and saddles. (2) **Geographical Practice Skills**: Learn to convert 3D terrain models into 2D contour maps using VR, and master the practical application of topographic maps. (3) **Man-Land Coordination View**: Through VR technology, grasp the practical utilization of different mountain features and cultivate the concept of human-land coordination based on local conditions.

5. Teaching Process

5.1 Scenario Introduction

Teacher's Activity: The Longji Terraces, with a history of at least 2, 300 years, are renowned as the Hometown of Terraced Fields in the World. Today, we embark on a field study expedition to the Longji Terraces. Before we do, let me ask: What kind of map do you usually use for a wilderness trip? Please find the pre-downloaded study terrain map, observe, and reflect on what information it contains and how to read it.

Students' Activity: Prepare the pre-downloaded VR terrain map of the Longji Terraces, observe the map, and contemplate the teacher's questions.

Design Intention: Displaying the VR contour map of the Longji Terraces, this local geography scenario serves to introduce the topic, engaging students' curiosity and learning interests by connecting it to their daily lives.

5.2 Exploration of New Knowledge I: Initial Understanding of Contour Maps

Teacher's Activity: Class, let's enjoy a VR video of the Longji Terraces created by our geography representative based on their travel experience. Together, we'll marvel at the beauty and local customs of the Longji Terraces, arousing your curiosity about its landscape features.

Students' Activity: Watch the classmate-made VR video, gaining an initial understanding of the history and local customs of the Longji Terraces, fostering curiosity about its landscape characteristics.

Teacher's Activity: In the VR video, you can see the winding mountain roads leading to the terraces, with an altitude of approximately 880 meters upon arrival. Our current position on the study VR map indicates an altitude of 600 meters. Does anyone know what altitude means? And what does the relative height of 280 meters on the VR map signify?

Students' Activity: Observe the study VR map, consult textbook Page 24 with the teacher's questions in mind, and grasp the concepts of relative height and altitude.

Design Intention: By showcasing student-created VR materials, we aim to stimulate students' interest in VR content creation while introducing the concepts of altitude and relative height, laying a foundation for subsequent learning.

5.3 Exploration of New Knowledge II: Understanding Contour Maps

Teacher's Activity: Class, we've arrived at the Longji Terraces at an altitude of 880 meters. Next, we'll hike to the top of the terraces at an altitude of 1, 100 meters. Before we do, let's learn how to interpret topographic maps. Please watch the VR learning materials and discuss among yourselves what the closed loops on the study map represent and what this type of map is called.

Students' Activity: Observe the VR learning materials, engage in discussions, and conclude that contour lines are curves connecting points of equal altitude on the ground. A topographic map is created by projecting multiple contour lines onto a plane at a reduced scale.

Design Intention: Empowering students as the center of the classroom, this activity encourages them to explore the VR world with guided questions.

5.4 Exploration of New Knowledge III: Interpreting Contour Maps

Teacher's Activity: Congratulations, class! We've successfully reached the top of the Longji Terraces, where we can see various landforms in the distance. Examine the study map and see if you can accurately locate these features. Now, let's follow the VR instructional video to learn about different surface names of mountains: peaks, ridges, valleys, saddles, and cliffs, and how to identify and describe their morpho-

logical characteristics.

Students' Activity: Watch the VR instructional video, learn how to distinguish and describe the shapes of peaks, ridges, valleys, saddles, and cliffs on contour maps, and summarize their morphological characteristics by comparing the map with the actual landscape of the Longji Terraces.

Design Intention: Through the VR instructional video, students can correlate real landscapes with their corresponding parts on the map, facilitating a deeper understanding of the concepts.

5.5 Class Summary

Teacher's Activities: Through this VR field study trip to the Longji Terraces, we have come to deeply appreciate that the Longji Terraces are not just a breathtaking scenic spot but also an exemplary harmonious coexistence between humans and nature. Therefore, protecting the Longji Terraces is tantamount to safeguarding our shared home. I hope students will start from themselves, cherish every piece of land, and ensure that the verdant beauty and vitality of the Longji Terraces endure forever.

Students' Activities: Review the content of this lesson, organize a mind map, and provoke thoughts towards establishing a correct view of human-land coordination.

Design Intent: To organize the key points of this lesson, assisting students in constructing a knowledge structure system for this lesson; emotionally elevate students' awareness, urging them to protect the Longji Terraces, strengthen their respect and protection consciousness for traditional culture, and inspire them to ponder and establish a correct view of human-land coordination.

5.6 Homework Assignment

Each student is required to search for relevant images of their hometown, convert the three-dimensional terrain model into a planar contour map using VR, and label the altitude, thereby deepening their understanding of contour maps.

6. Teaching Reflection

Compared to traditional geography teaching, geography teaching that employs VR technology offers a stronger sense of immersion, higher student interest, and stronger knowledge transfer ability. Students are no longer passive recipients of knowledge but actively participate in the learning process, actively exploring, discovering, and understanding. Compared to traditional images or videos, VR materials are closer to real objects, presenting students with more realistic and three-dimensional geographical landscapes. This enables students to more accurately identify peaks, ridges, cliffs, valleys, saddles, and other terrains when observing the terrain, thereby deepening their understanding of geographical knowledge.

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The Development Status and Countermeasures of Red Tourism and Research Integration in Haikou City Under the Background of Cultural and Tourism Integration

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Abstract: In the context of cultural and tourism integration, red tourism, as an important form of tourism, not only carries the important task of inheriting red culture and carrying forward the revolutionary spirit, but also becomes an important force to promote local economic development and rural revitalization. Taking Haikou city as an example, this paper discusses the development status of red tourism and research tourism under the background of cultural tourism integration, analyzes the existing problems, and puts forward corresponding development countermeasures, in order to provide reference for the integrated development of red tourism and research tourism in Haikou city and even the whole country.

Keywords: Red tourism; Research tourism; Tourism development

1. Introduction

With the improvement of people's living standards and the growth of spiritual and cultural needs, tourism is not only a way of leisure, but also a cultural and educational experience. As an important way to carry forward the revolutionary spirit and inherit the red gene, red tourism has attracted more and more attention in recent years. At the same time, research tourism, as an emerging form of tourism, has become an important means to improve the comprehensive quality of teenagers through the combination of education and practice. In the context of the integration of culture and tourism, the integrated development of red tourism and research tourism not only enriches the connotation of tourism products, but also promotes the deep integration of culture and education.

2. Development status of red tourism and research tourism in Haikou city

2.1 Rich in red tourism resources

There are many revolutionary sites of important historical significance in and surrounding areas of Haikou City, such as the site of the first Qiongya Congress of the Communist Party of China, the site of Qiongya Red Army Yunlong, and the former residence of Feng Baiju. These sites bear witness to the glorious course of the Qiongya Revolution and are an important basis for developing red tourism. Haikou city has also built a number of revolutionary history memorial venues, such as the revolutionary history museum, memorial hall and so on. By displaying revolutionary historical relics, pictures and images, these venues vividly reproduce the arduous struggle and heroic deeds of the revolutionary period, providing visitors with an opportunity to deeply understand the history of the revolution. As one of the important cradles of the Qiongya Revolution, Haikou has a rich red culture. The red culture here is not only reflected in the revolutionary history and ruins, but also deeply rooted in the lives of the local people, forming a unique red cultural atmosphere.

2.2 The Rise of the research and tourism market

With the deepening of the concept of quality education, more and more parents and educators realize that only classroom learning is not enough. It is necessary to let students out of the campus and increase their knowledge and broaden their horizons through personal experience and practice. The segmentation of the tourism market, the tourism market is increasingly segmented, and the research tourism, as a new travel mode combining tourism and education, is gradually favored by the market. The national and local governments have issued relevant policies to encourage and support the development of research tourism, providing a good policy environment for the research tourism market.

With the rise of the research tourism market, Haikou city has actively integrated educational resources and tourism resources, and launched a series of research tourism products. For example, we will conduct a volcanic study tour in Caldera Park, experience Nanyang culture in Arcade Street, and learn about the charm of Hainan's "intangible cultural heritage" in the intangible cultural heritage exhibition hall.