

# **Research on the Participation of Safety Education in Middle School Geography Teaching**

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**Abstract:** Geographic science is a discipline that extensively covers natural disasters and other safety related fields. In teaching practice, it has been found that integrating safety education can enable students to have a deeper understanding of the causes and response methods of natural disasters, enhance their self-protection awareness, and through practical activities and case analysis, students can personally experience the importance of disaster prevention and emergency response, thereby improving their safety literacy and practical operational abilities. This article adopts the research methods of questionnaire survey and teaching practice to deeply explore the role and impact of safety education in geography classroom teaching in junior and senior high schools on students' comprehensive development. Finally, taking the "Natural Disasters" chapter of the People's Education Press as an example, combined with real cases and scenario simulations, students can feel the danger brought by disasters and learn to effectively respond. This teaching method can stimulate students' interest and initiative in learning. In addition, safety education also focuses on cultivating students' emergency response abilities, enabling them to quickly make judgments and take effective measures in the face of unexpected situations. This article believes that integrating safety education into middle and high school geography classroom teaching is a good educational innovation and reform, which has a positive effect on promoting students' comprehensive development.

**Keywords:** Safety Education; Middle School Geography Teaching; People's Education Press "Natural Disasters"

## **1. Introduction**

In today's society, with the increasing security challenges, safety education at the secondary school level has received widespread attention. Safety education cultivates students' emergency response abilities. In the face of unexpected situations, students can quickly make judgments and take effective measures, improving their practical and adaptive abilities [1]. Through simulation exercises and practical activities, students can learn how to deal with various disasters and dangerous situations in a safe environment, and make sufficient preparations for daily life and emergencies, thus cultivating a group of students with emergency response abilities [2].

Given the comprehensive characteristics of geography in exploring natural environment, disaster response, and resource utilization, its teaching content involves multiple aspects such as geographical environment, natural disasters, and resource utilization, which are closely related to safety education [3]. Therefore, integrating safety education into middle and high school geography classrooms is a beneficial educational innovation. By integrating safety education into all aspects of geography teaching, such as practical activities such as geography experiments, social surveys, and field investigations, students have the opportunity to experience experiential learning in real environments. This not only improves students' comprehensive safety literacy, but also cultivates the next generation with safety awareness and emergency response capabilities, making positive contributions to the sustainable development and harmonious stability of society.

## **2. Current Research Status at Home and Abroad**

The organic integration of geography education and individual safety education for young people around the world has attracted widespread attention from the academic and

educational communities <sup>[4]</sup>. With global climate change and frequent natural disasters, research in this area has both important theoretical value and strong application prospects. At present, scholars at home and abroad are actively exploring how to integrate knowledge related to geographical environment changes, population distribution, resource utilization, etc., strengthen students' safety awareness and emergency response capabilities, and improve their ability to respond to various emergencies.

### **2.1 Current Research Status Abroad**

In geography education abroad, especially in European countries and developed countries such as the United States and Japan, emphasis is placed on the combination of theoretical practice and skill application. Developed countries such as Russia, Japan, France, and the United States consider the expansion of safety literacy among middle and high school students as a fundamental task of national security. In recent years, as the birth rate has further decreased and education costs have increased, more and more scholars have explored how to integrate safety education into geography teaching. For example, some studies focus on teaching students how to identify and respond to natural disaster risks through geographic information system (GIS) technology. There are also many studies on safety education in geography teaching process abroad, focusing on improving the safety awareness and emergency response ability of middle and high school students through specific field practices.

### **2.2 Current Research Status in China**

China's research in this field started relatively late, but has developed rapidly. There are 244 articles searched on CNKI with the theme of "geographical security education", and only 20 of them are highly consistent with the theme. It can be seen that there is little research on this aspect in China, and the time span of these 20 articles is from 2010 to 2023. It is worth mentioning that they are all concentrated after 2008. It can be seen that after the Wenchuan earthquake in 2008, countrymen have learned a painful lesson. China has begun to pay attention to safety education gradually, and the awareness of disaster prevention and relief has been valued <sup>[5]</sup>. Many Chinese scholars and

educators have begun to attach importance to the combination of geographical teaching and safety education. In places where natural disasters occur frequently, such as earthquakes, floods, etc., many scholars are exploring how to use geography courses to enhance students' disaster prevention knowledge and abilities. In addition, some studies have integrated, extracted, and optimized the safety education content in middle and high school geography textbooks. At the same time, in the context of the new curriculum reform, in order to improve the innovative thinking, problem-solving ability, and comprehensive literacy of middle and high school students <sup>[6]</sup>, and enhance their ability to handle emergencies, many schools have also introduced safety education content into classroom teaching.

Overall, domestic and foreign scholars have shown a positive development trend in the integration of geography teaching and safety education, but there are still many challenges and unresolved issues. For example, in future research, we must delve into how to combine advanced teaching tools and technologies with traditional educational resources to achieve maximum utilization of teaching resources. Improving teachers' professional skills and teaching methods is also crucial, as it not only enhances their classroom performance but also improves students' learning outcomes.

## **3. Feasibility Analysis of Integrating Safety Education into Middle School Geography Teaching**

### **3.1 Characteristics Analysis of Integrating Safety Education into Geography Curriculum**

#### **3.1.1 Comprehensive Content**

From the perspective of textbook content, modern safety education textbooks are no longer limited to traditional basic knowledge such as fire prevention and disaster prevention, but cover a wider range of content. This is closely related to topics such as environment, disasters, and resources involved in geography teaching <sup>[7]</sup>. Combining safety education with geography classroom teaching can give students a holistic understanding of safety issues and also enable them to learn self-protection skills in various geographical environments.

### 3.1.2 Systematicity and Scientificity

From the structure and arrangement of safety education, modern safety education textbooks place more emphasis on systematicity and scientificity. By setting reasonable chapters and arranging knowledge points, students can gradually learn safety knowledge and establish a comprehensive safety knowledge system.

### 3.1.3 Practicality and operability

Modern safety education textbooks also place great emphasis on practicality and operability. Safety education textbooks not only introduce safety knowledge, but also provide detailed explanations on how to apply this knowledge in real life and how to respond when encountering safety issues. The arrangement and setting of this practical feature enable students to have a deeper understanding and mastery of basic safety knowledge during the learning process, improve their self-protection ability and ability to help others.

### 3.1.4 Closely connected to life

The close connection between safety education and daily life is particularly evident when integrated into geography teaching. Geography, as a discipline that explores the interrelationship between nature and human activities, often touches upon environmental issues, resource utilization, disaster prevention, and other topics that are closely related to our lives. As for safety education, it also focuses on various hidden dangers and prevention methods that may arise in our daily lives.

## **3.2 Advantages of Penetrating Safety Education in Geography Teaching**

Geography teaching has significant advantages in the infiltration of safety education. Due to the fact that safety education involves a wide range of knowledge and skills, it requires teaching content that is both comprehensive and professional. Therefore, it is particularly important to find suitable carriers for the infiltration of safety education. The geography course, with its unique disciplinary characteristics, has become an ideal choice for implementing safety education<sup>[8]</sup>. Geography has strong comprehensiveness, and its research content is closely related to human life, especially the part involving natural disasters, which coincides with the prevention and response to natural disasters in safety education. Geography textbooks themselves contain rich safety education materials,

especially on the causes, processes, and prevention measures of natural disasters, providing students with intuitive and systematic learning materials. In addition, geography teaching also emphasizes the practicality and experiential learning of middle and high school students, advocating the use of modern geography science teaching methods to create more practical opportunities. This feature enables geography courses to combine theoretical knowledge of safety education with practical operations, allowing middle and high school students to learn and master safety skills through practical activities such as geography themed activities, on-site visits, and emergency evacuation drills. Therefore, geography teaching can not only provide rich safety education content, but also effectively transform these contents into students' practical abilities through practical activities, thus having unique advantages in the implementation of safety education.

## **4. Practice of Penetrating Safety Education in Middle School Geography Teaching**

From the direct or indirect knowledge of natural disasters in high school geography textbooks, it can be seen that natural disasters are closely related to the Earth's environment, ecosystems, human activities, sustainable development, and geographic information technology in high school geography textbooks, and the content is relatively complex. According to data released by the National Disaster Prevention and Reduction Commission, in 2023, natural disasters in China will mainly include floods, typhoons, earthquakes, and geological hazards. Drought, hail, low temperature freezing, snow disasters, sandstorms, and forest and grassland fires will also occur to varying degrees. Throughout the year, various natural disasters caused a total of 95.444 million people to be affected to varying degrees, resulting in 691 deaths and missing persons. 3.344 million people were urgently relocated and resettled; 209000 houses collapsed, 623000 were severely damaged, and 1.441 million were generally damaged; The direct economic loss was 345.45 billion yuan. Teenagers have a particularly weak awareness of safety. When natural disasters strike, they lack reverence for them, have inadequate understanding of protective knowledge and attitudes, and lack their own protective skills.

As a result, teenagers are often the most vulnerable and severely injured group. But these are not only important aspects of safety education, but also mandatory parts of high school geography textbooks [9]. Taking "natural disasters" as an example, we will demonstrate the teaching design and implementation concept of integrating safety education into high school geography teaching.

#### **4.1 Textbook and Analysis of Learning Situation**

This lesson is selected from Chapter 6, Section 3 "Disaster Prevention and Reduction" of Geography Compulsory Course 1 published by People's Education Press. This section is about the types, causes, hazards, and mitigation strategies of natural disasters. Students have already learned geographical knowledge such as atmosphere, water, and crustal movement on Earth before this, providing a certain foundation for the study of this lesson. This lesson should focus on the close connection between abstract indirect knowledge and students' life world, so that the learning of indirect experience is supported by direct experience [10]. In real life, students have also learned some knowledge about natural disaster prevention from different media, but the specific causes, classification, and disaster prevention and reduction of natural disasters are not yet systematic enough. In this section, we use case analysis, group discussions, and other methods to briefly describe the main causes and hazards of a certain natural disaster [11], so that students can deeply understand the importance of disaster prevention and reduction, and master basic disaster prevention knowledge and emergency prevention skills.

#### **4.2 The Objectives of Teaching**

First, students are able to understand and identify the geographical characteristics of various natural disasters, and recognize the intricate connections between natural hazards and the geographical environment. (Regional cognition)

Second, enable students to comprehensively analyze natural, cultural, and economic factors from different perspectives, and propose corresponding prevention and control measures. (Comprehensive thinking)

Third, through on-site inspections and data

collection, students can estimate the disaster risks in a certain area and provide relevant prevention and control measures. (Geographic Practical Ability)

Last, enhance students' understanding of the mutual impact between natural disasters and human activities, and recognize the rational use of land and resource management to reduce disaster risks. (Human environment coordination view)

#### **4.3 Teaching Key and Difficult Points**

Key points: Types and causes of natural disasters; Basic measures and methods for disaster prevention and reduction.

Difficulty: How to develop effective disaster prevention and reduction plans based on actual situations.

#### **4.4 Classroom Teaching Process**

In the preparation stage before class, the teacher determined their teaching objectives, divided the students into different groups, distributed relevant materials and videos, and also designed exploratory questions related to this lesson to ensure that students were fully prepared before class.

In class, teachers introduce videos of the Wenchuan earthquake into the classroom to stimulate students' interest in natural disasters, and guide them to think about the causes and response methods of natural disasters through questioning. Next, the teacher provided a detailed explanation of the concept and types of natural disasters, and used the Wenchuan earthquake as an example to analyze the causes, processes, and impacts of natural disasters. The teacher emphasized the importance of disaster prevention and explained the basic principles and methods of disaster prevention and control.

In order to help students better understand and master knowledge, the teacher organized practical activities, requiring students to discuss and develop disaster prevention and reduction plans in groups [12]. Subsequently, each group shared the results of the discussion and received feedback from other groups. This process not only cultivates students' teamwork ability, but also deepens their understanding and mastery of disaster prevention and mitigation measures, enabling the effectiveness of safety education to be demonstrated in classroom teaching.

Finally, during the classroom summary stage, the teacher reviewed the main content of this lesson and reminded students to enhance their disaster prevention awareness, emphasizing the importance of applying the disaster prevention and mitigation knowledge and skills learned in daily life. The teacher evaluated the students' classroom performance, affirmed their active participation and innovative thinking, and assigned them tasks after class to consolidate and expand their knowledge, allowing their innovative thinking to fully develop.

#### **4.5 Teaching Reflection**

This lesson aims to help students comprehensively understand natural disasters and their prevention and mitigation measures through case analysis, group discussions, and other forms. In the teaching process, I found that students have a strong interest in the causes and hazards of natural disasters, but some students show some confusion when formulating disaster prevention and reduction plans<sup>[13]</sup>. In future teaching, I should pay more attention to guiding students to connect with reality, cultivating their ability to solve problems, and achieving a close connection between theory and practice. On this basis, this article further recognizes that in carrying out disaster safety education, in addition to imparting basic safety knowledge to students, it is also necessary to strengthen training in students' awareness of prevention, self-protection skills, and self rescue and mutual assistance. Therefore, in future teaching, I will introduce more practical activities to allow students to learn and grow through firsthand experience. In addition, I will also pay attention to individual differences among students and provide targeted teaching based on their needs and characteristics to improve teaching effectiveness.

### **5. Research Conclusions**

#### **5.1 Safety Education is of Great Significance in Geography Teaching**

As a comprehensive course, geography covers multiple aspects of life, including natural environment, social environment, and natural disasters. And safety education is closely related to the life safety and healthy growth of every student. Integrating safety education into

geography teaching is not only responsible for the comprehensive development of students, but also a return to the origin of education. Therefore, appropriately integrating safety education into middle and high school geography teaching can not only enhance students' safety awareness and improve their ability to cope with potential natural disaster hazards, but also strengthen students' learning of relevant geography basic knowledge. This interdisciplinary integrated teaching, through the study of geography courses, enables students to have a more comprehensive understanding of various safety issues and learn how to protect themselves in different geographical environments. The systematic and scientific characteristics of geography make the transmission of safety education knowledge more organized and easy to understand. The practicality and applicability of geography teaching also provide rich practical opportunities for safety education, allowing students to learn and master safety skills through personal experience, which helps to cultivate students' comprehensive safety literacy and lay a solid foundation for their future development.

#### **5.2 Integrated Teaching can Significantly Enhance Students' Learning Outcomes and Interests**

Through practice, it has been found that integrating safety education into geography teaching has significantly improved students' learning outcomes and interests. By ingeniously integrating the content of basic safety education in middle and high school geography teaching, we can see that students' learning enthusiasm has been significantly improved, and their investment and participation in geography courses have been significantly increased. Especially, the clever integration of safety education has brought new fun and vitality to geography classrooms. In traditional geography teaching, perhaps more emphasis is placed on imparting and memorizing knowledge, but integrating teaching with safety education content tightly links geography knowledge with practical life. For example, when studying natural disasters such as earthquakes and volcanoes, we not only explain their geographical causes, but also combine safety education to teach students how to quickly respond and protect

themselves in the event of these disasters. This teaching method enables students to deeply understand that geographical knowledge is not just something in books, but practical skills closely related to their own life safety. At the same time, the integrated teaching model is constantly enriching teaching methods and activity designs, improving students' learning efficiency and enhancing their interest in learning. We utilize multimedia teaching resources to showcase real cases and videos related to geography and safety education, providing students with a more intuitive visual and auditory experience. It is worth mentioning that this type of integrated teaching also provides many opportunities for middle and high school students to explore and learn independently, thereby further enhancing their interest in geography learning.

### **5.3 The Improvement of Students' Practical Ability is an Important Achievement of Safety Education**

Through the practice of safety education in geography teaching, students' practical abilities have been effectively improved. In traditional geography teaching, students may passively receive knowledge, but with the integration of safety education, students are encouraged to actively explore and practice, thus enhancing their understanding of safety knowledge in practical operations. For example, during field investigations, students not only need to apply geographical knowledge to analyze natural elements such as terrain and climate, but also need to identify and avoid potential safety risks based on safety education guidance.

Safety education also focuses on cultivating students' emergency response abilities. How to quickly make judgments and take effective measures in the face of emergencies is an important skill that every student needs to master. Through the practice of safety education in geography teaching, students have mastered the ability to remain calm in the face of emergencies, utilize various resources in the environment, and build their own knowledge reserves. This enables them to better protect themselves and others, while improving their own abilities and enhancing their self-protection awareness. In daily life, students begin to be more proactive in paying attention to safety hazards around them and

learn to take preventive measures. The enhancement of self-protection awareness not only helps students maintain safety on campus, but also plays a positive role in their future life and work.

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