

Review and Prospect of Disaster Education Research in China

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Abstract: Disaster education is an important part of both social education and school education. However, research on disaster education in China only gained attention after the Wenchuan earthquake on May 12, 2008, and there have been only a few studies on disaster education in the past decade. This paper reviews the basic consensus reached by scholars on issues related to the basic theory and educational practice of disaster education, including the value of disaster education, the current state of disaster education in China, and the cooperation of multiple subjects in disaster education. In conclusion, there are still deficiencies in China's disaster education, such as unclear basic theoretical issues, general research perspectives, scattered research content, and traditional research methods. Future research on disaster education urgently needs to draw on international experience and rely on Chinese cultural traditions to combine multidisciplinary theoretical research with comprehensive practical exploration to explore feasible implementation strategies for disaster education and strive to build a disaster education system and research system with Chinese characteristics to enhance the pertinence and effectiveness of disaster education.

Keywords: disaster education, research process, development trend, Chinese education

1. Introduction

Disaster refers to a sudden, large-scale, and serious event that endangers human life, property, and social stability caused by natural or human factors. Disasters have characteristics such as unpredictability, uncontrollability, and irreversibility, which bring great harm and trauma to humans. Therefore, how to effectively cope with and mitigate the impact of disasters on humans has become an important and urgent issue. Although China's disaster education started late, it has achieved certain results at present. However, there is little discussion on the research process of disaster education. This paper systematically sorts out and comprehensively analyzes the literature on disaster education at home and abroad, so as to provide a reference for the development of disaster education in China. In the paper, the first part introduces the concept and value of disaster education; the second part outlines the development process, characteristics, and experience of foreign disaster education; the third part reviews the research status, problems, and trends of China's disaster education; the fourth part puts forward suggestions and prospects for China's disaster education.

2. Concept and Value of Disaster Education

2.1. Concept of Disaster Education

After the Wenchuan earthquake in 2008, China gradually paid attention to disaster education and related research. A general review of the existing literature shows that the concept of disaster education can be roughly divided into four categories. One is to regard disaster education as an education to enhance students' disaster coping ability. For example, Yang Ting proposed in her study that "disaster education" is "to cope with the damage and impact caused by natural and man-made disasters through effective ways to promote individual disaster coping ability education" [1]. Yang Xiaowei believes that "the so-called disaster education is to guide learners to understand, cope with, experience, and reflect on the process of disaster, and help them form relevant knowledge, skills, abilities, and attitudes in disaster education" [2]. The second is to regard disaster education as an education related to disasters. Li Gaofeng believes that "disaster education refers to the education on the early warning and prevention of disaster as well as the psychological guidance for students under the premise of facing up to disasters" [3]. The third is to regard disaster education as a comprehensive education conducted through disaster materials. Lei Shi proposed that "the so-called disaster education, as the name suggests, should be based on the major disasters that human beings have encountered as basic materials, guide students to understand nature, society, and themselves, thus leading them to cherish life, improve crisis awareness, master scientific methods, strengthen character cultivation, enhance social responsibility, and cultivate basic abilities to cope with various disasters" [4]. The fourth is to explain disaster education from a reverse perspective. Luo Zuben first proposed in his article that "disaster education refers to the education that enables students to feel the disasters suffered by human beings and let them realize the fragility of life and the powerlessness of human beings, thereby awakening their life consciousness and enhancing their compassion and empathy" [5].

2.2. The Value of Disaster Education

Disaster education, as an important and urgent education, has always been an essential topic discussed by scholars in China. Reviewing the existing literature, the author summarizes the value of disaster education as follows.

First, disaster education is conducive to improving students' or the public's awareness of disaster risks and hazards, and enhancing their ability to prevent and reduce disaster losses. Through disaster education, students or the public can understand the impact and consequences of different types and degrees of disasters, master relevant knowledge and skills, improve their ability to identify, prevent, cope with, and recover from disasters, thereby effectively reducing the threat of disasters to their life and property safety and social stability [6].

Second, disaster education is conducive to alleviating students' or the public's psychological trauma during or after disasters, and restoring their normal life and learning. Through disaster education, students or the public can obtain necessary psychological support, material assistance, security guarantees, etc., relieve their negative emotions such as fear, anxiety, sadness, anger, etc. during or after disasters, and enhance their positive emotions such as confidence, optimism, strength, resilience, etc., thereby effectively promoting their psychological health and social adaptation [7].

Third, disaster education is conducive to promoting students' or the public's reflection and summary of disasters, and improving their ability to learn and grow from disasters. Through disaster education, students or the public can analyze and evaluate disasters from multiple perspectives and levels, explore the causes, characteristics, impacts, and coping methods of disasters, and summarize the experiences and lessons learned from disasters. Moreover, suggestions and measures for

improvement and perfection can be proposed, thereby effectively improving their thinking ability, innovation ability, critical ability, and problem-solving ability.

Fourth, disaster education is conducive to cultivating students' or the public's compassion, empathy, love, and sense of responsibility, and establishing their correct values and attitudes towards life, nature, society, future and so on. Through disaster education, students or the public can feel the suffering and helplessness of human beings in disasters. They can learn to appreciate the solidarity and dedication of human beings in disasters and inspire themselves to care for and help the victims and survivors of disasters. Besides, their positive values and attitudes such as awe of life, respect for nature, care for society, belief in the future, etc. can be cultivated, thereby effectively enhancing their moral literacy and civic literacy.

3. The Development History, Characteristics and Experience of Disaster Education Abroad

Foreign countries have a long history of attaching importance to and developing disaster education. According to different types and degrees of disasters encountered by different countries and regions in different periods, as well as different ways and strategies adopted by different countries and regions in different periods for disaster education, it can be roughly divided into the following stages.

3.1. Initial Stage: From the 1950s to the 1970s

This stage is mainly represented by the United States, under the background of the Cold War, for the air defense education against the threat of nuclear war. Disaster education at this stage mainly conveys to students or the public the harm and protection measures of nuclear war, such as "fall down, cover, and hold on" through propaganda films, posters, manuals and other ways. The purpose of this education is to raise students' or the public's awareness and prevention ability of nuclear war, and reduce the possible losses caused by nuclear war. However, there are also some problems, such as exaggerating the controllability and preventability of nuclear war, ignoring the globality and disaster of nuclear war and causing panic and powerlessness among students or the public.

3.2. Comprehensive Exploration Stage: From the 1980s to the 1990s

This stage is mainly represented by Japan. After experiencing several natural disasters and man-made disasters, Japan conducted a comprehensive exploration and practice of disaster education. Disaster education at this stage covers not only various types of disasters such as nuclear war, earthquake, volcano, and tsunami, but also various aspects such as prevention education, emergency education, and recovery education. Through incorporating disaster education into the school curriculum, this kind of education mainly carries out disaster experience activities and establishes disaster museums and memorial halls to convey to students or the public the truth and lessons of disasters, cultivate their disaster awareness and coping ability, and promote their psychological health and social adaptation. Its characteristics are focusing on practicality, experience, and participation, making full use of social resources and folk forces, and forming a diversified, collaborative, and open disaster education network.

3.3. In-depth Development Stage: From the Beginning of the 21st Century to Now

This stage is mainly represented by Europe. In the face of new challenges brought by globalization and climate change, European countries conducted in-depth development and innovation of disaster education. Through formulating international standards and guidelines, disaster education at this

stage not only pays attention to natural disasters and man-made disasters but also new types of disasters such as terrorism, epidemics, and poverty. What is more, it not only emphasizes the teaching of knowledge and skills but also the guidance of emotions and values. This kind of education mainly carries out cross-national cooperation and exchange and promotes policy formulation and implementation to convey to students or the public the globality and complexity of disasters, cultivate their global citizenship awareness and sense of responsibility, and promote their cross-cultural understanding and communication. Its characteristics are focusing on theorization, innovation, and internationalization, fully drawing on international experience and advanced concepts, and forming a high-efficiency, professional, and international disaster education system.

4. The Research Status, Problems and Trends of Disaster Education in China

China is a country with many disasters and calamities. It has experienced many natural disasters and man-made disasters, which have caused great losses to the safety of people's lives and property and social stability. Therefore, carrying out disaster education, improving the quality of the people, enhancing social cohesion, and promoting social stability and development have important and urgent significance. However, China's attention and development of disaster education is relatively lagging behind and there are many problems and shortcomings. This part mainly reviews and analyzes the research status, problems, and trends of disaster education in China.

4.1. Research Status

China's research on disaster education started late, mainly after the Wenchuan earthquake in 2008. According to the statistics of relevant literature collected in the China National Knowledge Infrastructure (CNKI) database, from 2008 to 2023, there are 140 articles related to disaster education, among which 2009 is the peak value, reaching 17. In terms of the literature type, most of the literature is in the type of journal articles (122), followed by master's degree thesis (18) and doctoral degree thesis (2). From the perspective of discipline fields, a majority of literature studies the field of education (88), followed by medicine (11), psychology (3), sociology (4), etc. Regarding research content, the literature mainly focuses on basic theoretical issues such as the concept, connotation, value, goal, content, and form of disaster education.

4.2. Research Problems

However, there are still many shortcomings and limitations in the current research on disaster education.

First, China has not formed a unified understanding and definition of the basic theoretical issues such as the concept, connotation, value, goal, content, and form of disaster education, and different researchers have given different explanations and elaborations from different perspectives and positions, therefore, the theoretical system and guiding principles of disaster education are not clear and perfect enough. In addition, China's theoretical research on disaster education also shows a lack of depth and breadth. There is a shortage of a full consideration of the relationship and interaction between disaster education and other related fields and disciplines, a full analysis of the differences and characteristics of disaster education in different social and cultural contexts, as well as a full exploration of the innovation and development of disaster education in coping with new challenges such as globalization and climate change.

Second, the research perspective is too general, lacking pertinence and meticulousness. At present, China's research on disaster education is mainly from a macro perspective to a general description and analysis, without fully considering the differences and characteristics of disaster education in different stages, fields, types, degrees and so on. In addition, there is also a lack of

attention to the needs and effects of disaster education in different individuals, groups, communities and so on. Moreover, it is also insufficient in revealing the influencing factors and mechanisms of disaster education in different environments, conditions, mechanisms and so on. Therefore, China's research on disaster education lacks pertinence and meticulousness and can not effectively guide and promote the practice of disaster education.

Third, the research content is too scattered, lacking systematization and coherence. At present, China's research on disaster education is mainly around a certain class of disasters for case analysis or case summary, without forming a complete disaster education research system and framework. This results in a lack of systematization and coherence in China's research on disaster education and can not effectively reflect the whole picture and law of disaster education. In addition, China's research on disaster education also lacks continuity. It does not form a stable disaster education research team and platform and can not effectively track and evaluate the implementation and effect of disaster education.

Fourth, the research method is too traditional, lacking innovation and diversity. At present, China's research on disaster education mainly uses traditional quantitative or qualitative methods such as the literature analysis method, questionnaire survey method, and interview survey method. It fails to make full use of new methods such as modern information technology and data science. Meanwhile, there is a lack of a combination of various methods such as experimental design, action research, and case study. What is more, the initiative and creativity of the subject are not given full play. Therefore, China's research on disaster education lacks innovation and diversity and can not effectively improve the quality and level of disaster education research.

4.3. Research Trends

Facing the new situation and tasks of the new era, China's disaster education research needs to constantly develop and innovate to adapt to the needs and changes of society. According to the research status and development direction at home and abroad, China's disaster education research may present the following trends in the future:

4.3.1. Strengthening Theoretical Research and Innovation

On the basis of absorbing international experience and advanced concepts, relying on Chinese cultural tradition and social reality, there is a need to deeply explore the basic theoretical issues such as the concept, connotation, value, goal, content, and form of disaster education. Besides, it is also necessary to form a disaster education theory system and guiding principles that conform to China's national conditions and characteristics, thereby providing a scientific basis and guidance for disaster education practice.

4.3.2. Refining the Research Perspective and Content

It is important to classify and analyze disaster education from different stages, fields, types, degrees and so on. There is also a need to evaluate the needs and effects of disaster education on different individuals, groups, communities and so on. Moreover, it is essential to discuss the influencing factors and mechanisms of disaster education from different environments, conditions, mechanisms and so on, thus improving the pertinence and meticulousness of disaster education research.

4.3.3. Systematizing the Research Content and Method

Disaster education should be described and analyzed comprehensively from various aspects such as prevention education, emergency education, and recovery education, thus forming a complete

disaster education research system and framework. At the same time, new methods such as modern information technology and data science should be made full use of to combine various methods such as experimental design, action research, and case study. The initiative and creativity of the subject need to be given full play to improve the innovation and diversity of disaster education research.

4.3.4. Continuing the Research Process and Results

An effective communication and coordination mechanism needs to be established among various subjects such as government, school, community, family, and media, thereby, forming a stable disaster education research team and platform. At the same time, the implementation and effect of disaster education are supposed to be tracked and evaluated for a long time. Moreover, it is important to timely summarize experiences and lessons learned and constantly improve and perfect disaster education theory and practice, thus improving the continuity of disaster education research.

5. Suggestions and Prospects for Disaster Education in China

The development history, characteristics, and experience of foreign disaster education provide useful references for the development of disaster education in China. China's disaster education can learn from foreign disaster education experience from the following aspects:

Firstly, attach importance to theoretical research and innovation in disaster education and establish a theoretical system and guiding principles of disaster education with Chinese characteristics. For example, incorporate disaster education into school curriculum, through classroom teaching, extracurricular activities, curriculum design, and other ways, thus leading students to systematically learn disaster-related knowledge, skills, emotions, values, and so on.

Secondly, improve policies, laws, and institutional guarantees for disaster education and clarify standards and requirements for objectives, content, forms, subjects, responsibilities, evaluation, and other aspects of disaster education. For example, promote policy formulation and implementation through formulating national standards and guidelines, providing professional training and guidance, establishing evaluation mechanisms and punishment systems, guiding government, schools, communities, families, media, and other subjects to clarify their roles and responsibilities and jointly promote the implementation of disaster education.

Thirdly, enrich content and forms of disaster education, cover various types and degrees of disasters, use various ways and methods for disaster education, and pay attention to practicality, experientiality, and participation. For example, carry out disaster experience activities through simulation exercises, site visits, volunteer services, etc., guiding students or the public to experience and participate in disaster education personally, thereby improving their practical ability and innovation ability.

Fourthly, strengthen diversified collaboration and open communication in disaster education, fully utilize resources and forces from all aspects of society, establish an effective communication and coordination network for disaster education, and promote cooperation and exchange at home and abroad [8]. For example, by participating in international organizations and projects, conducting cross-border research and dialogue, and drawing on international experience and advanced concepts, students or the public can understand the practices and achievements of different countries and regions in disaster education, thus enhancing their global citizenship and cross-cultural understanding.

6. Conclusions

In short, disaster education is an important and urgent education, which has important and urgent significance for improving the quality of the people, enhancing social cohesion, and promoting social stability and development. There are still some problems and shortcomings in the development of disaster education in China, which require continuous development and innovation to adapt to the needs and changes of society. In the future, China should improve its theoretical research, policies and regulations, content forms, and subject collaboration to build a disaster education system and research system that is in line with China's national conditions and characteristics, so as to enhance the pertinence and effectiveness of disaster education.

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