Education for Sustainable Development: Deficiency and Construction of Disaster Education in Universities

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Abstract. After the outbreak of SARS, Chinese State Council published "Master State Plan for Rapid Response to Public Emergencies". After the outbreak of Wenchuan earthquake, May 12 of each year is designated as the "National Day for Disaster Prevention and Reduction". Modern society is transforming from industrial society to risk society. With the widespread of human-made risks, we are facing the world out of control. Emergencies may occur at any time and sometimes cause catastrophic damage to our life in a sudden. However, Chinese universities’ disaster education did not get enough attention yet. Based on the theory of risk society and discontinuous education, this research analyzed the potential deficiency in crisis education and proposed to establish a systematic crisis education curriculum as soon as possible. Also, universities should actively carry out emergency drills to simulate the real scene of disasters to the maximum extent, so university students can develop disaster instinctive response and strengthen disaster survival skills. University students should be well-prepared for the survival challenges. Disaster education plays a critical role in transforming a crisis into a real opportunity for sustainable education development.

1. Introduction
According to Beck [1], the founder of risk society theory in the west, modern society is in a great transformation period from industrial society to risk society. Beck proposed his idea of the ‘Risk Society’ in his 1992 publication ‘Risk Society: Towards a New Modernity’. His ideas emerged from the developing discipline of risk management, rooted in sociology. Giddens [4] divided the risk society into two types: external risk and human-made risk. With the widespread spread of human-made risks, the world has become a world out of control. China's long-term peace era and stable environment have weakened people's awareness of risks and crises. For a long time, the lack of crisis education has led to the low ability of crisis response. The self-help, co-help and public rescue in emergency are not optimistic. University students are lack of psychological preparation and ability to deal with emergencies. In order to prevent and respond to emergencies, disaster education is an educational activity to teach emergency awareness, knowledge, skills and values, also known as "crisis education", "disaster prevention education" and "public safety education". In the face of frequent human emergencies, the international community has paid more and more attention to emergency education. In recent years, China's emergency response reform has been deepened, the national health and Health Commission and the emergency management department have been established successively, and the emergency education system has been continuously improved. Although China's emergency education has achieved certain fruit, there are still some problems, mainly reflected in the single form of education, the lack of practical exercises, insufficient capital investment, and low level of education. The channels of
emergency education are scattered, community education and family education are weak, and they have not yet formed a joint force with school education. University education plays a key role in disaster prevention and mitigation. Emergency education is a requisite course that every university student should master and need to learn for whole life. Emergency education is an important factor to effectively prevent and respond to emergencies at low cost.

2. Literature review

On 9th May 2003, the State Council [5] published “Regulations on Preparedness for and Response to Emergent Public Health Hazards”, the first administrative regulation in public emergency field, before the end of the SARS epidemic. On 8th January 2006, the State Council [6] published " Master State Plan for Rapid Response to Public Emergencies " after the outbreak of SARS, bird flu, mine disaster, earthquake, water pollution, snowstorm and other public emergencies. The master plan was based on the experience of Chinese government over the years and the beneficial practices of foreign countries, through the decision-making process of brainstorming, scientific democratization and in accordance with the requirements of administration according to law, And pay attention to the combination of practice. As the turning point of establishing and improving the overall emergency plan for public emergencies in China, SARS has contributed to the basic completion of the preparation of the plan from the central government to the local government and the preliminary formation of the overall plan framework, which provides a normative guidance for the prevention and disposal of public emergencies in the future. Aiming at four kinds of emergencies, natural disaster, accident disaster, public health event and social security event, the whole process and all-round management is carried out from prevention and emergency preparation, monitoring and early warning, emergency disposal and rescue, post recovery and reconstruction.

Table 1. Classification of public emergencies in China

| No. | Type           | Form                                                                 | Essential Characteristic              |
|-----|----------------|----------------------------------------------------------------------|---------------------------------------|
| 1   | Natural Disaster | Flood, drought, frost, typhoon, meteorological disaster, earthquake, geological hazard, bio-disaster, forest fire | Caused by the natural factor         |
| 2   | Accident        | Industry security accident, traffic and transportation accident, public facilities and equipment accident, environmental pollution | Caused by people disregard of behavior rule |
| 3   | Public Health Emergency | Outbreak of infectious diseases, congregative unknown disease, food security, animal epidemic disease | Caused by natural and human factors   |
| 4   | Social Security Incidents | Terrorist attack, ethnic and religious conflict, group unexpected incidents | Caused by certain social problems    |

Public emergencies can be classified into extraordinarily serious accidents, serious accidents, major accidents and ordinary accidents according to the possible degree of harm, scope of influence, loss of personnel and property, etc. The emergency can be divided into four levels from high to low: (1) Level I, death toll more than 30 people regarded as extraordinarily serious accidents, investigated by the State Council; (2) Level II, death toll between 10 to 30 people regarded as serious accidents, investigated by provincial government; (3) Level III, death toll between 3 to 10 people regarded as major accidents, investigated by municipal government; and (4) Level IV, death toll between 1 to 3 people regarded as ordinary accident, investigated by county government. The early warning is separated by the four colours: red, orange, yellow and blue.
Table 2. Four level of public emergencies in China

| Level | Name                      | Color | Death toll   | Investigated by            |
|-------|---------------------------|-------|--------------|----------------------------|
| I     | Extraordinarily Serious   | Red   | Over 30 people | The State Council          |
| II    | Serious Accident          | Orange| 10 to 30     | Provincial government      |
| III   | Major Accident            | Yellow| 3-10         | Municipal government       |
| IV    | Ordinary Accident         | Blue  | 1-3          | County government          |

Bollnow [2] though that life development is the integration of continuity and discontinuity, and that crisis is part of human lives. Crisis brings not only destruction but also a new beginning for our life, and it has fundamental meaning and value for personal development. According to Bollnow [2], crisis is a kind of discontinuous phenomenon, which is a part of people's life. As long as people live in the world, they will inevitably encounter various crises. Crisis is a "double-edged sword", which makes people have difficulties that cannot be extricated and have to interrupt the normal life process. It threatens people's life and causes disasters to people's lifetime has a negative impact on the healthy development of human physiology and psychology. But the disaster brought by the crisis can also be stopped or overcome. Once students get through the crisis, they will get a new starting point of life. Crisis belongs to the essence of human beings, which is essential to the self-development of students. So if education wants to promote the improvement of students, it cannot ignore the crisis in students' life. University students are in a vigorous and vital stage. It is a period from naive to mature, and from family to society. At the same time, it is also a period of great changes and facing multiple crises. According to Bollnow’s suggestions, if teachers can use this opportunity to carry out crisis education for students, it will be conducive to the healthy growth of students. However, the reality of our school is not so, crisis education in the university is still a blank. In the face of the sudden-crisis, university students do not have the psychological preparation and coping skills to deal with the crisis, which has a direct relationship with the neglect of crisis prevention and coping skills education for a long time. Therefore, from the current status of college students, it is urgent to strengthen crisis education.

3. Research Methods
This paper aimed to identify the problems of disaster education on university students in China. During the procedure of action research, the content analysis is applied as the main research methodology, assisted with interview and case study method. A qualitative approach was applied, using the content analysis method, which is a common analysis approach in qualitative research. This article reviewed and categorized empirical studies related to disaster education and discontinuous education that were published in Google Scholar and CNKI database. While on the other hand, the researchers interviewed participants from 3 universities to gather specific data. The key interview question included what were the problems of disaster education on university students in China? The participants were asked to speak freely on what they think are the practical measures to improve university students’ disaster survival awareness and skills.

4. Results and Discussion
The UN Office for Disaster Risk Reduction (UNDRR) organized “UN World Conference on Disaster Risk Reduction” on 14-18 March 2015 in Sendai, Japan. International Day for Disaster Risk Reduction is every 13 October to promote a global culture of risk-awareness and disaster reduction. The day celebrates how people and communities around the world are reducing their exposure to disasters and raising awareness about the importance of reining in the risks that they face. In 2019, UNDRR focused on Target D of the Sendai Framework, reducing disaster damage to critical infrastructure and disruption of basic services.
The above figure reported economic losses of major disasters over a 10-year period from 1998 to 2017. Here selected four major disasters with large economic impact. In 2005, hurricanes in Katrina, Rita & Wilma cost USA, Central America & Caribbean US$ 201 billion. In 2008, the earthquake in Sichuan cost China US$ 96 billion and affected 46 million people. In 2011, the immense damage caused by the earthquake and tsunami, with the consequent shut down of the Fukushima nuclear energy plant cost Japan US$ 228 billion. In 2017, category 5 tropical cyclones in Harvey, Irma & Maria cost US$ 245 billion.

According to the statistics from Centre for Research on the Epidemiology of Disasters (2018), there are different kinds of disasters all over the world from 1998 to 2017, such as flood, storm, earthquake, extreme temperature, landslide, drought, wildlife, volcanic activity, mass movement, etc. The global economy is developing rapidly, which brings the fatal chemical pollution. The air pollution, ocean pollution and food pollution caused by exhaust gas discharge, sewage discharge, food safety and garbage accumulation are becoming more and more serious. Global warming, bad environment and disaster are also coming. Because the inherent food chain of the earth has suffered chain damage, the whole earth seems to be in a semi-paralyzed state, so that the earth has to start its own purification function, a big clean-up.
awareness of disaster prevention and reduction and promote the improvement of the level of disaster prevention, reduction and relief work, from 2009. May 12 of each year is designated as the "National Day for Disaster Prevention and Reduction". On the one hand, it complies with the demands of all sectors of society for China's disaster prevention and mitigation. On the other hand, it reminds the people to remember the past and learn from the future, pay more attention to disaster prevention and mitigation, and strive to reduce disaster losses. Since 2009, every year's disaster prevention and mitigation day has a specific theme, which popularizes the ability of disaster prevention and mitigation to the whole society. At the same time, it shows the determination of the people of the whole country to work together.

Table 3. Theme of national day for disaster prevention and reduction 2009-2019

| No. | Time     | Theme                                                                 |
|-----|----------|-----------------------------------------------------------------------|
| 1   | 2009.5.12| Disaster prevention and mitigation day                               |
| 2   | 2010.5.12| Disaster reduction starts from community                             |
| 3   | 2011.5.12| Disaster prevention and mitigation start from me                     |
| 4   | 2012.5.12| Promote the culture of disaster prevention & reduction, improve the awareness of disaster reduction |
| 5   | 2013.5.12| Identify disaster risk and master disaster reduction skills         |
| 6   | 2014.5.12| Urbanization and disaster reduction                                   |
| 7   | 2015.5.12| Using science for disaster reduction and legal response              |
| 8   | 2016.5.12| Reducing disaster risk and building a safe city                      |
| 9   | 2017.5.12| Reduce community disaster risk and improve disaster reduction capacity of grass roots |
| 10  | 2018.5.12| Take action to reduce the disaster risk around us                    |
| 11  | 2019.5.12| Improve the ability of disaster prevention & control, build the defense line of life safety |

Throughout a person's life development, it is always accompanied by various crises such as illness, natural disasters, traffic accidents, mental health, etc. The process of human growth is a process of understanding, avoiding and transforming crisis. Crisis education is an indispensable part of school education. When faced with environmental crisis, natural knowledge can help us find solutions to problems; when faced with inner confusion, reading and thinking can help us to untie the knot. It can be said that crisis education is an indispensable educational content in the process of students' growth. It includes not only safety education and health education in the conventional sense, but also the influence of national and national development on individual destiny. To do a good job in crisis education can awaken students' awareness of life safety, guide students to treat the relationship between human and self, human and nature, human and society prudently, learn to get along rationally and harmoniously, and enhance their self-protection skills.

5. Conclusions
Crisis education focuses on the cultivation of students' life values of "life equality, self-development and responsibility", let each student respect life, regard helping others as a part of helping themselves, emphasize the restriction of self-behavior, clarify the ideal and goal of life, and commit to bear their own mission in school, family, society and country. In order to cultivate the above values, we should cultivate students' ability of crisis identification, crisis early warning, crisis response, crisis mutual assistance and crisis reflection. In other words, students can identify the crisis, take scientific and effective measures before the crisis with their own life experience, accept the help of others in the process of response, and do their best to help others, and reflect on the experience and lessons of the crisis, so as to build strong self-protection skills.

References
[1] Beck U. (1992). Risk society: Towards a new modernity. London: Sage
[2] Bollnow O F. (1999). Educational anthropology. East China Normal University Publishing
House.

[3] Centre for Research on the Epidemiology of Disasters (CRED). (2018). Economic losses, poverty and Disasters 1998-2017. https://www.unisdr.org/2016/iddr/IDDR2018_Economic%20Losses.pdf

[4] Giddens A. (2001). Runaway world: How globalization is reshaping our lives. Routledge: New York.

[5] The State Council. (2003). Regulations on preparedness for and response to emergent public health hazards. China Legal Publishing House.

[6] The State Council. (2006). Master state plan for rapid response to public emergencies. China Legal Publishing House.