

Disaster Emergency Education Practices in Japanese Public Libraries: A Survey and Implications (Postprint)

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Abstract

[Objective/Significance] In major disaster events, the issues of citizens' weak self-rescue awareness and low emergency response capabilities are becoming increasingly prominent. Nationwide disaster emergency education has become a public cultural service that urgently needs to be implemented. This study aims to examine how libraries can effectively fulfill their educational functions within this public cultural service.

[Method/Process] This research selects Japanese public libraries with extensive experience in disaster emergency education as reference cases, and conducts an online investigation of disaster education activities across 59 Japanese public libraries from two dimensions: cooperative participation elements and experiential learning pathways. It analyzes the composition of cooperative participation elements, including cooperation partners, service targets, educational resources, policy systems, and cultural environments, and extracts experiential learning pathways that facilitate knowledge comprehension and transformation.

[Results/Conclusion] Drawing upon the practices of Japanese public libraries, this study offers recommendations for Chinese public libraries to develop disaster emergency education from the perspectives of cooperative participation elements and experiential learning pathways.

Full Text

Introduction

In major disaster events, the problems of citizens' weak self-rescue awareness and low emergency response capabilities have become increasingly prominent, making disaster emergency education for the entire population an urgent public cultural service to be developed. This study focuses on how libraries can

effectively fulfill their educational functions in this public cultural service. By selecting Japanese public libraries, which possess considerable experience in disaster emergency education, as reference objects, this research conducted an online survey of disaster education activities across 59 Japanese public libraries from two dimensions: cooperative participation elements and experiential learning paths. The study examined the composition of cooperative participation elements such as cooperation partners, service targets, educational resources, policy systems, and cultural environments, and extracted the experiential learning paths that promote knowledge understanding and transformation. Drawing on the practices of Japanese public libraries, this paper offers recommendations for developing disaster emergency education in China's public libraries from both cooperative participation elements and experiential learning paths.

Keywords: Japan; library; disaster emergency education; cooperative participation; experiential learning

China frequently experiences natural disasters. While floods in Henan and other places are heart-wrenching, incidents of drowning in subways, tunnels, and vehicles also expose serious problems of weak citizen emergency awareness and low self-rescue capabilities. Currently, the general public exhibits the following characteristics when facing disasters: negative emotions during disasters and passive rescue-waiting behavior, high dependence on government, and low self-rescue confidence. Citizens' disaster response psychology and emergency behavior urgently need to shift from "government-dependent" to "citizen-autonomous." The core features of "citizen-autonomous" include systematic storage and dynamic updating of disaster emergency knowledge, rational judgment and objective estimation of disaster event trends, moderate confidence in one's own emergency capabilities without pessimism or blindness, and full consciousness of self-rescue and mutual rescue in disaster scenarios.

For a long time, all sectors of society and governments at all levels have actively advocated and carried out disaster education and emergency training. However, there remains a large gap between the current situation and the "citizen-autonomous" goal, mainly for the following reasons: disaster education and emergency training primarily occur through "school education," with "primary and secondary schools" as the main targets, leaving the vast majority of citizens outside schools uncovered; emergency training in schools and public institutions focuses mainly on "earthquake evacuation" and "fire escape," far from meeting the needs of "all-disaster comprehensive emergency response"; corporate emergency training mainly targets industry-specific production safety goals, with little coverage of universal disaster prevention and mitigation. Consequently, there are still many gaps and blind spots in disaster emergency education and training for the general public.

German sociologist Beck pointed out in his work *Risk Society* [1] that major disasters pose irresistible "skill risks" and "survival risks" to human life safety, and that proactive educational behavior and high risk awareness are key to avoiding, mitigating, and preventing crises. However, the *China Public Disaster*

Prevention Awareness and Disaster Reduction Knowledge Basic Survey Report shows that nearly 70% of citizens have never thought about disaster avoidance, and less than 4% pay attention to disaster response knowledge in daily life [2]. China's disaster education has not yet achieved "proactive" universal coverage, and existing emergency training is far from sufficient to foster "risk awareness" for all disaster types. National regulations such as the *Law of the People's Republic of China on Science and Technology Popularization* [3] and the *13th Five-Year Plan for National Science Popularization and Innovation Culture Construction* [4] urgently require various public cultural institutions to jointly participate in disaster emergency education to achieve overall improvement in national risk awareness and emergency skills.

As important providers of public cultural services, libraries have the responsibility and obligation to contribute to cultivating citizens' cultural literacy for social development. Emergency culture is an important public culture in the "risk society," and disaster emergency education is the life mechanism for improving the emergency culture level of the whole society, inherently possessing cultural characteristics. The international library community has accumulated relatively rich experience in disaster emergency education practice. The U.S. National Library of Medicine (NLM) established the Disaster Information Management Research Center in 2008 to provide the public with information resources related to natural, accidental, or man-made disasters, and cooperated with the Medical Library Association (MLA) to launch disaster information specialties, training disaster information experts to meet community disaster education needs [5]. The Australian Library and Information Association (ALIA) holds national emergency preparedness activities on "October 13 International Day for Disaster Risk Reduction" each year [6]. Japan has even established specialized "disaster prevention libraries" to improve national risk awareness and promote disaster prevention culture formation [7].

2 Related Research

Currently, domestic library research on "disaster emergency" mainly focuses on libraries' own disaster prevention and emergency management, with specific emergency responses during particular emergencies as content. Few scholars have focused on the broader social goal of improving citizens' emergency cultural literacy, and none have deeply explored the new practical topic of how libraries can participate in disaster emergency education.

Domestic library scholars have conducted considerable research on library emergency plans and management. First, scholars such as Zhong Deqiang, Liu Bing, and Li Jian have explored foreign libraries' role positioning, preventive measures [8], emergency response and emergency alliance mechanisms [9] when dealing with emergencies, conducted case analyses of specific foreign emergencies [10], and interpreted foreign emergency plans and management regulations to provide references for domestic libraries to formulate emergency plans and improve emergency services [11]. Second, scholars such as Cai Yingchun, Guo Yajun, and Ran

Weiran have investigated specific domestic emergencies like COVID-19, SARS, and earthquakes, examining various libraries' specific emergency measures such as emergency work mechanisms, reading services, online and offline resource promotion, and thematic resource database construction, to discuss the current service status of libraries in resources, management, technology, platforms, and staff capabilities, thereby developing emergency service systems suitable for libraries [12-15]. Third, scholars such as Ke Ping and Wei Dawei have theoretically summarized libraries' own emergency management positioning and functions, envisioning emergency mechanisms from aspects such as establishing specialized collections, developing emergency products, and conducting special emergency services [16-17].

In summary, current domestic library research on "disaster emergency" mainly targets libraries' own disaster prevention and emergency management, with content focusing on specific emergency responses during particular emergencies. Few scholars have focused on the broader social goal of improving citizens' emergency cultural literacy, and none have deeply explored the new practical topic of how libraries can participate in disaster emergency education.

As a disaster-prone country, Japan, led by the Japan Library Association (JLA), the National Diet Library, and the Public Library Council, continuously supports disaster emergency education in libraries at all levels through policies and programs, placing Japan's public libraries at the world-leading position in the field of disaster emergency education. Therefore, this paper takes Japanese public libraries as research objects, uses case analysis methods to analyze their disaster education practice models, and summarizes experiences and measures to provide theoretical references and enlightenment for various types of libraries in China to develop disaster emergency education.

3 Research Design

3.1 Sample Selection

This study primarily adopts online investigation and case analysis methods, taking the 59 prefectural-level (equivalent to provincial level in China) public libraries published in Japan's 2019 national statistics and statistical yearbook as research objects [18]. The selected sample libraries are distributed across various regions of Japan, including Hokkaido, Tohoku, Kanto, Chubu, Kinki, Chugoku, Shikoku, and Kyushu, with quantities of 1, 6, 14, 9, 10, 5, 4, and 10 respectively, as shown in Table 1 .

3.2 Case Analysis Framework

Japan possesses a relatively complete and unified disaster education system internationally. In 2004, it established the "Disaster Education Challenge Plan" public assistance project, which supported disaster education activities of 307 practice groups including public service institutions from 2004 to 2019 [19].

In 2015, the Disaster Education Challenge Plan Executive Committee and the Japanese Cabinet Office issued the *Regional Disaster Education Practice Guidelines* (hereinafter referred to as the *Guidelines*). The *Guidelines* were interpreted and praised at the “International Disaster Prevention Education Exchange Forum” of the Third United Nations World Conference on Disaster Risk Reduction [19]. The *Guidelines* [20] require relevant organizations such as education groups, non-profit organizations, and public service groups (libraries, museums, etc.) to establish long-term cooperation mechanisms within and outside the region, distinguish education targets, and actively collect disaster prevention knowledge and information. They also advocate introducing disaster prevention elements into daily community activities and festival atmospheres, emphasizing public personal experience, and adding “game” elements to activities so that the public can learn disaster prevention happily.

Based on the above analysis, disaster emergency education in Japanese public libraries is a social education project with multi-subject collaborative participation. Libraries, enterprises, and social institutions are important participants, while educational resources, policy systems, and cultural environments are important supporting tools. Libraries also emphasize happy learning of disaster prevention knowledge in daily life and jointly building multi-dimensional experiential learning circles through “experiential” education activities for all citizens. Therefore, this paper mainly investigates and analyzes the current situation of disaster emergency education in public libraries from two dimensions: cooperative participation elements and experiential learning paths.

4 Case Analysis

4.1 Cooperative Participation Elements

French philosopher Latour’s Actor-Network Theory [27] emphasizes that multiple actors interact to form heterogeneous networks, dividing actors in scientific activities into human actors (such as individuals, organizations, institutions, etc.) and non-human actors (such as technology, resources, places, facilities, morality, systems, etc.), both of which play important roles in scientific activities. This aligns with the multi-subject collaborative participation characteristics of Japanese public libraries’ disaster emergency education and can provide theoretical support for identifying libraries’ cooperative participation elements.

4.1.1 Human Actors According to national policy and system requirements, disaster emergency education in Japanese libraries has the following characteristics: (1) Guided by the Cabinet Office’s *Disaster Countermeasures Basic Act* [21], the Ministry of Education, Culture, Sports, Science and Technology’s *Library Risk Management Guide - Preparing for Disasters* [22], the Public Library Council’s *Public Library Crisis Management - Earthquake Disaster Countermeasures Report* [23], the *Regional Disaster Education Practice Guidelines* [20], and requirements from various regional education committees, the Japanese library community vigorously expands the breadth of disaster emergency education.

For example, the National Diet Library established the East Japan Earthquake Archive Database [24], and libraries (L) jointly set up saveMLAK disaster relief information sites with museums (M), archives (A), and community centers (K) [25]. (2) Libraries at all levels cooperate with the Meteorological Agency, Fire Department, Disaster Prevention Hall, Disaster Information Society, universities, and academic institutions to formalize disaster knowledge and rescue experience according to the cognitive characteristics of different audiences and international friends, effectively integrating popularizable knowledge resources. For example, librarians in Nagano Prefecture extensively collected disaster materials to assist the Iida City Red Cross in creating disaster picture-story shows and multilingual evacuation support maps to help different audiences understand disaster prevention knowledge [20]. (3) Libraries connect disaster prevention with annual festivals, equip relevant experience facilities, and conduct experiential activities such as disaster prevention competitions, drills, learning disaster prevention applications, etc., to guide students to think actively and practice hands-on. For example, Osaka City Library invites parents and children to make “Level 0 Preparation” disaster prevention products, experience fire extinguisher training to learn firefighting skills, and learn the Japan Meteorological Agency’s “Heavy Rain/Flood Warning Risk Distribution Program” to understand local risks using smartphones [26].

Based on the above analysis, disaster emergency education in Japanese public libraries is a social education project with multi-subject collaborative participation. The human actors in the cooperative participation elements include the library as the organizer, as well as its cooperation partners and service targets. From the perspective of the organizer’s specific measures, public libraries actively respond to national calls and form “actor networks” with social academic groups and public welfare organizations. For example, they cooperate extensively with local disaster experts, library associations, schools, disaster prevention professional institutions, disaster prevention volunteer organizations, disaster prevention public welfare organizations, education committees, children’s associations, enterprises, etc., establishing practical cooperation relationships in face-to-face communication environments to ensure the professionalism and breadth of disaster emergency education.

Public libraries also collaborate with various cooperation partners to focus on different service targets, designing and practicing various educational services from simple to complex for different age groups. Specifically, they design and implement disaster emergency education in stages and types according to the needs of various groups such as children, adolescents, pregnant women, the elderly, people with disabilities, as well as different occupations and institutional groups. Details are shown in Table 2 .

4.1.2 Non-Human Actors The investigation shows that non-human actors in Japanese public libraries’ disaster emergency education cooperative participation elements include educational resources, policy systems, and cultural

environments.

- (1) **Educational Resources.** Most Japanese public libraries have established dedicated physical disaster prevention book areas, data rooms, earthquake corners, and exhibition corners in their buildings, and display educational resources through VR virtual imaging and related technologies. Many library official websites have set up disaster prevention thematic pages and databases, collecting disaster prevention and reduction books, natural disaster information, disaster records, disaster countermeasures, and research institution academic achievements in all-media formats. Notably, many Japanese public libraries adopt a sustainable development model of “collecting while constructing,” calling on governments, citizens, publishers, etc., to donate disaster materials through library website announcements, local media publicity, librarian visits, and volunteer distribution of flyers. Details are shown in Table 3 .
- (2) **Policy Systems.** As a disaster-prone country, Japan has elevated disaster emergency education to the national will level. As social education institutions implementing this national will, public libraries have clearly defined the goals, measures, departmental tasks, and responsibilities of disaster emergency education in their “management policies,” “operation plans,” “service plans,” and other policy documents and institutional regulations, according to national documents such as the *Regional Disaster Education Practice Guidelines* [20], *Disaster Countermeasures Basic Act* [21], and *Library Risk Management Guide - Preparing for Disasters* [22]. Details are shown in Table 4 .
- (3) **Cultural Environment.** Disaster culture is the collective term for all knowledge, wisdom, attitudes, or behaviors formed by human groups in the historical process of dealing with natural disasters for the purpose of disaster prediction, prevention, and mitigation. From a temporal perspective, human disaster culture has evolved from resignation to fate, to avoidance, resistance, early warning, and rescue, and then to comprehensive systematic engineering for disaster prevention and mitigation. From a spatial perspective, different regions and ethnic groups have different disaster cultures. Since the Great Kanto Earthquake, Japan’s disaster culture has mainly included three layers of cultural meaning: promoting others’ evacuation, building trust foundations, and alleviating survivors’ guilt.

Disaster emergency education is a public cultural service that helps educatees dialectically and rationally understand the relationship between humans and nature, change established concepts, improve survival skills, and improve social systems by utilizing natural concepts and survival consciousness formed in the process of human struggle against nature’s negative impacts. The disaster culture permeating Japanese libraries’ disaster emergency education is more vivid and experiential. Public libraries anchor to various national disaster prevention days, disaster prevention weeks, environment days, disaster memorial days, and

science popularization days to regularly carry out various disaster prevention experience activities. For example, Miyagi Prefectural Library, Tokyo Metropolitan Library, Kyoto Prefectural Kyoto Institute/Library/Archives, and Mie Prefectural Library conduct disaster prevention drills and thematic exhibitions during the disaster prevention week centered on September 1 Disaster Prevention Day every year to improve citizens' disaster prevention capabilities. They also cooperate with city and county fire departments, medical teams, and other disaster prevention institutions to hold practical training and rescue exercises for earthquakes and heavy rains.

Disaster culture is the conceptual guide for disaster emergency education. Disaster emergency education should not only focus on knowledge and skills but also on culture and significance, making pre-disaster, during-disaster, and post-disaster education form an organic whole around educatees' life value and social value.

4.2 Experiential Learning Paths

Japanese libraries' "experiential learning" for disaster emergency education advocates that the public should fully understand natural disasters through personal experience, independent thinking, and comprehension, and transform knowledge into skills through application, trial, and transformation practices [20]. Kolb's experiential learning theory [28] emphasizes acquiring knowledge from two dimensions: understanding and transformation. The understanding dimension includes concrete experience and abstract conceptualization, which is the process of perception and comprehension; the transformation dimension includes reflective observation and active experimentation, which is the process of transforming knowledge into skills. Japanese public libraries' "experiential learning" methods for disaster emergency education coincide with Kolb's experiential learning theory, thus providing a reasonable perspective for identifying experiential learning paths in this paper.

4.2.1 Knowledge Understanding Dimension According to Frye's concept of learning situations [28], concrete experience can be achieved through emotional communication and free learning, obtaining knowledge through personal experience over time; abstract conceptualization can be achieved through theoretical reading and independent thinking to understand knowledge.

From the understanding dimension, to promote educatees' understanding of disaster emergency knowledge, many Japanese public libraries have conducted systematic situational design, fully incorporating concrete experience as a perception method. For example, they use thematic exhibitions, lectures, or thematic salons, video playback, and other activity forms to assist free learning and communication of disaster knowledge. They also fully incorporate abstract conceptualization as a comprehension method, such as enhancing learners' sensory experience and knowledge understanding through book reading recommendations and self-reflection. Details are shown in Table 5 .

4.2.2 Knowledge Transformation Dimension According to Frye’s concept of learning situations [28], reflective observation can help learners reflect on events’ intentions, goals, meanings, and feedback through professional guidance, achievement judgment standards, and incentive means; active experimentation can apply theoretical knowledge to practice through group discussion, peer help, and hands-on operation to solve practical problems.

From the transformation dimension, to assist the transformation of disaster emergency knowledge, many Japanese public libraries’ disaster emergency education fully incorporates reflective observation and active experimentation as auxiliary knowledge transformation methods. Specifically, public libraries focus on conducting hands-on design, visit exchanges, reference consultation, competitions, disaster drills, disaster training, game-based disaster prevention, preparing disaster survival kits, and other highly experiential group activities when designing disaster emergency education activities. Under the guidance of professionals such as firefighters and disaster rescue personnel, and based on clear judgment standards, they conduct group discussions and mutual assistance through incentive means such as issuing “disaster expert certificates” and souvenirs, advocating the use of personal skills to solve practical problems to assist knowledge transformation. Details are shown in Table 6 .

5 Implications from Japanese Public Libraries’ Disaster Emergency Education

Based on the practical experience of Japanese public libraries’ disaster emergency education, this paper proposes suggestions for developing disaster emergency education in China’s public libraries from two major aspects: cooperative participation elements and experiential learning paths. The overall 思路 is shown in Figure 1 [Figure 1: see original paper].

5.1 Cooperative Participation Elements

5.1.1 Cooperation Partners Our previous investigation of disaster emergency science popularization activities in 31 provincial-level public libraries in China found that most libraries have not yet established long-term cooperative relationships with key institutions within and outside their regions. Most libraries only temporarily invite personnel from earthquake bureaus, fire departments, universities, science popularization associations, etc., for short-term training courses. Currently, libraries lack professional disaster experts, and librarians have limited disaster knowledge reserves, leading to singularity and disorder in disaster education resource construction [29]. Therefore, on the one hand, China’s public libraries can establish long-term collaborative cooperation mechanisms with local academic societies, disaster prevention professional institutions, public welfare organizations, schools, enterprises, etc., to leverage each entity’s advantages and improve the professionalism and effectiveness of disaster emergency education. On the other hand, they can cooperate with

disaster science experts, emergency science popularization experts, emergency management experts, university professors, etc., to build a resource collaboration network with their professional academic levels and practical experience.

5.1.2 Service Targets Article 34 of China's *Public Library Law* clearly stipulates that public libraries should consider the cognitive development characteristics of children and special groups and provide them with needed information, facilities, and services [30]. It is worth affirming that domestic public libraries' disaster emergency education has classified user needs, especially for vulnerable groups such as children, the elderly, and people with disabilities. For example, the Guangdong Provincial Sun Yat-sen Library has established an accessible film broadcasting platform for the visually and hearing impaired on its WeChat official account for epidemic prevention science knowledge [31]. However, more unified age and user group classifications need to be formulated, and different forms of disaster emergency education and service methods need to be customized to exert users' subjective initiative. For example, picture books and parent-child interaction can be mainly used for young children, competitions, hands-on projects, and disaster prevention practical training for adolescents, relevant academic information and research results for adults, and 亲和力好的读物和面对面交流的方式 for special groups such as people with disabilities and the elderly to improve their disaster prevention capabilities.

5.1.3 Educational Resources Currently, a few domestic libraries have established epidemic-themed resource databases mainly targeting the COVID-19 outbreak at the end of 2019. For example, the Hubei Provincial Library has established the "e-Hai Yue Du" digital resource database providing authoritative epidemic science popularization and journal materials for domestic and foreign users [32]. In addition, libraries mainly collect popular science books, data images, and thematic exhibitions of conventional disasters such as earthquakes, fires, and floods, and have not yet established all-disaster comprehensive emergency education resources in multi-carrier formats. Therefore, on the one hand, China's public libraries should establish physical disaster prevention data corners and book areas, including paper resources on disaster encyclopedias, safety accidents, major earthquake historical records, flood and drought disasters, meteorological disasters, biological disasters, forest disasters, disaster recovery, disaster medicine, disaster psychology, etc. On the other hand, they should build information resource databases linking various disaster types from meteorological and earthquake departments, collecting local government disaster prevention plans, disaster maps, disaster statistics, and other resources according to local conditions.

5.1.4 Policy Systems China's *Public Library Law* proposes that libraries shoulder the function of disseminating scientific and cultural knowledge [30]. The *13th Five-Year Plan for National Science Popularization and Innovation Culture Construction* requires libraries to carry out disaster emergency science

popularization activities close to people's lives to enhance scientific and technological appeal and improve science popularization service effectiveness [4]. However, it does not specify specific education frameworks, content, and standards. Therefore, China's public libraries can, based on national basic policies and regulations such as the *13th Five-Year Plan for National Science Popularization and Innovation Culture Construction*, *Science Popularization Law*, and *Public Library Law*, combined with their actual conditions and local needs, refine the implementation methods and practical strategies for disaster emergency education in their internal development policies and strategic plans, and plan and design their responsibilities, tasks, and specific measures for developing disaster emergency education.

5.1.5 Cultural Environment The *Opinions on Further Strengthening Emergency Science Popularization and Education Work for Emergent Events* by five ministries including the Ministry of Emergency Management requires using time nodes such as National Disaster Prevention and Reduction Day, Science Popularization Day, and National Safety Production Month to carry out enjoyable disaster emergency education activities, forming a vivid situation of national mobilization and mutual promotion [33]. Some Chinese libraries carry out activities such as earthquake disaster reduction science exhibitions, disaster knowledge competitions, and escape drills during the May 12 National Disaster Prevention and Reduction Day and the 119 Fire Safety Promotion Month [34-35]. However, a nationwide participatory disaster emotional education atmosphere has not yet been formed. The painful lesson of 21 deaths in the Gansu marathon shows that the public's disaster emergency awareness remains weak. Therefore, China's public libraries should combine national science popularization days, disaster reduction days, and emergency culture months, and also combine local ethnic and religious customs, such as time nodes related to disaster prevention in traditional twenty-four solar terms, to regularly hold special disaster prevention education activities that can form brand effects. They should fully utilize the cultural environment to carry out disaster emergency education while making disaster emergency education an organic component of people's cultural life.

5.2 Experiential Learning Paths

5.2.1 Assisting Knowledge Understanding China's libraries have rich experience in reading promotion and literacy education, thus showing unique advantages in carrying out disaster emergency education activities that assist the public's knowledge understanding. They pay more attention to excellent book recommendations, inviting experts to give lectures, and holding disaster knowledge science popularization exhibitions. For example, the China Library Association's Reading Promotion Committee has carried out a librarian-recommended book collection activity with the theme of "Disaster Education in the Eyes of Librarians," recommending 58 excellent works to readers and promoting disaster education reading promotion in libraries at all levels [36]. On the one hand, China's public libraries can continue to leverage their resource advantages, fully

contact local experts and professional institutions, hold online and offline lectures and book recommendations, and rely on local actual online and offline “disaster memory” exhibitions to assist knowledge understanding through situational embedding. For example, libraries in Sichuan can jointly hold earthquake expert lecture series and “earthquake resistance memory” exhibitions; libraries in Hubei can jointly hold anti-epidemic expert lecture series and “epidemic fighting memory” exhibitions. On the other hand, they can also assist the public’s understanding of disaster knowledge through establishing disaster-themed reference consultation services, MOOCs, and other perceptual understanding paths.

5.2.2 Assisting Knowledge Transformation First, domestic public libraries lack experiential and interactive disaster emergency education venues. Although some practices have deeply explored the construction of science popularization venues, such as the Jiangxi Provincial Library establishing a life safety education experience space in the children’s area on the first floor [37], most domestic libraries have not yet established specialized disaster culture venues and education bases in their buildings. Second, practical projects such as skill training, emergency drills, hands-on design of disaster prevention works, and preparation of disaster survival kits are still relatively rare. Therefore, on the one hand, China’s public libraries can rely on their own building space advantages to moderately construct experiential, practical, and scenario-simulated disaster education science popularization and training venues. The author’s field investigation in 21 cities and prefectures in Sichuan found that a large number of grassroots community reading rooms and rural book houses are set up adjacent to street community “emergency offices” or village government “emergency offices” (both being essential functional institutions for grassroots governments). Therefore, grassroots libraries can make full use of this spatial convenience to jointly carry out community-level physical emergency education and training activities with grassroots government disaster reduction departments. On the other hand, they can carry out competitive training, drills, hands-on operations, and develop game APPs with disaster emergency themes (using disaster emergency knowledge to pass levels) to assist the transformation of disaster knowledge into emergency skills.

As early as 1995, the United Nations proposed: “Education is at the center of disaster reduction plans, and knowledge is the key to the success or failure of disaster reduction.” In recent years, disaster emergency education in China’s public libraries at all levels has seen some initial exploration, especially in remote, backward, and disaster-prone areas. For example, Xinjiang Hotan region’s rural book houses have established 1,382 rural fire science popularization stations jointly with the fire brigade [38]; several rural book houses in Shuangfeng County, Hunan [39]; and grassroots librarians in community libraries in Liangshan Yi Autonomous Prefecture, Sichuan, explain disaster knowledge and prevention skills through animation and hand-drawing [40]. Although China’s public libraries’ disaster emergency education has begun to emerge, libraries still need to vigorously expand the connotation and extension of their educational func-

tions under the goal of comprehensively improving citizens' disaster emergency literacy, learn from advanced foreign experiences, and plan and design effective ideas and schemes for disaster emergency education to make new contributions to public cultural services in the new era.

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Li Rui: Proposed the research topic, designed the research 思路, wrote part of the content, and revised the paper.

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Investigation and Enlightenment on the Practice of Disaster Emergency Education in Japanese Public Libraries

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Abstract: [Purpose/significance] In major disaster events, the problems of citizens' weak self-help awareness and low emergency capabilities have become increasingly prominent, making disaster emergency education for the whole people an urgent public cultural service to be carried out. This study aims to focus on how libraries can effectively perform their educational functions in this public cultural service. [Method/process] Selecting Japanese public libraries with considerable disaster emergency education experience as reference objects, this paper conducted an online survey of disaster education activities in 59 Japanese public libraries from two dimensions: cooperative participation elements and experiential learning paths. It studied the composition of cooperative participation elements such as cooperation partners, service targets, educational resources, policy systems, and cultural environments, and extracted the experiential learning paths that promote knowledge understanding and transformation. [Result/conclusion] Referring to the practice of Japanese public libraries, this paper provides suggestions for developing disaster emergency education in China's public libraries from the two aspects of cooperative participation elements and experiential learning paths.

Keywords: Japan; library; disaster emergency education; cooperative participation; experiential learning

Note: Figure translations are in progress. See original paper for figures.

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