

Collaborative Governance Mechanism for the Safeguarding of Intangible Cultural Heritage in the Internet Age

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Abstract. The popularization and application of large data has further aggravated the differences between the modern social environment and the original environment of intangible cultural heritage. With digitization and informatization gradually evolving from the technical measures for the safeguarding of intangible cultural heritage to the part of modern living environment of intangible cultural heritage, it is urgent to reassess and rethink about the original safeguarding work. The safeguarding of intangible cultural heritage is a huge project, and its construction requires not only participation of many parties, but also mutual cooperation and collaboration. The popularity of large data and mobile internet only provides a technical means for group planning and sharing. Open and cooperative governance mechanism is the key to effectively pool the protection resources and improve the protection efficiency.

Introduction

In good times of traditional culture, intangible cultural heritage has been organically integrated into people's production and life, and its existence relies on some specific communities and environments [1]. During the transition from farming culture to modern civilization, the living environment of intangible cultural heritage has undergone tremendous changes. The dramatic changes in the social environment is the fundamental reason for the continuous decline of intangible cultural heritage, which makes it difficult for many intangible cultural heritage individuals to meet the actual needs of modern people, thus lacking effective public support.

The gradual popularization of big data and Internet technologies, on the one side, provides more powerful and convenient technical measures for the safeguarding of intangible cultural heritage; on the other hand, it brings great impact on many aspects, such as social development, people's life, public governance and even people's way of thinking, and profoundly affects the modern living environment of intangible cultural heritage. At the technical level, the development of information technology is conducive to the preservation and dissemination of the intangible cultural heritage information; from the perspective of living environment, the popularization and application of big data widens the gap between modern social environment and intangible cultural heritage environment. Therefore, in the process of safeguarding intangible cultural heritage, not only at the technical level, but also in the aspects of social dissemination, surviving strategy, organization and implementation of safeguarding work, should we consider the wide influence of information revolution and 'Internet +' on the surviving of intangible cultural heritage and explore how to build a safeguarding paradigm that is suitable for the current social environment.

Challenges of Safeguarding Intangible Cultural Heritage

The development of Internet and computer technology has been widely used for cultural communication and the safeguarding of intangible cultural heritage in the world, and it has been widely recognized as a necessary protection method. Advances in science and technology inevitably lead to an increase in work efficiency, but for the inheritance of intangible cultural heritage, opportunities coexist with challenges.

The preservation, storage and dissemination of information are more and more convenient under modern scientific and technological measures, but the continuation of intangible cultural heritage's life is a very complicated sociological problem. With the constant changes in the social environment, some intangible cultural heritage becomes more and more difficult to survive. In traditional society, the intangible cultural heritage is adapted to the masses' needs and in line with the productivity level and public aesthetic at that time. Modern science and technology revolution and social changes result in the failure of a lot of intangible cultural heritage which are adapted to the traditional society to meet the actual needs of modern people.

Over the past decade or more, governments at all levels, cultural protection units, universities and research institutions have taken an active part in and supported the cause of safeguarding intangible cultural heritage, and relevant research appears rapid growth. The country strongly supports the protection of intangible cultural heritage. Governments at all levels implement a large number of safeguarding work and construction projects, and invest a lot of manpower and financial resources to carry out high-tech safeguarding [2]. However, in general, the current situation of heavy construction and light use is quite serious [3]: some projects are only built to complete the project acceptance, regardless of the actual use effect, and lack user experience after the completion of construction; some of the established cultural data resources are not available for the public; after the construction period is over, some safeguarding projects lack the concept of post-maintenance and leave it without update and maintenance, resulting in the gradual failure of construction results.

Government agencies, museums, libraries, archives, universities, research institutes and even individuals can be the subject of safeguarding intangible cultural heritage [4]. Different subjects have different objectives and ways of work, purposes and visions. Even for the same intangible cultural heritage content, different units have different expectations for the depth and breadth of the protection work. A lot of international and national intangible cultural heritage is not unique to a certain city, but existing in a large time and space span. Therefore, for the same intangible cultural heritage, cultural protection units in different regions may develop their own safeguarding plans, and carry out safeguarding work such as collection, consolidation and database construction. Even some units in the same city set up projects for the same intangible cultural heritage. A large amount of cultural protection funds and efforts are reused, resulting in the great waste of resources.

Modern enterprises need to pursue new profit growth points constantly, which accelerate the obsolescence of technology [5]. In pursuit of new product performance, new data file formats emerge endlessly, and it is difficult to be fully compatible with the original technology. Complex and incompatible file formats often result in the inaccessibility of old information in new environments, which poses a huge challenge to the effective accumulation of digital information of intangible cultural heritage.

Collaborative Governance Mechanism

Safeguarding intangible cultural heritage is a huge project, and its construction requires not only participation of many parties, but also mutual cooperation and collaboration. The popularization of big data, cloud platforms and mobile internet only provides technical means for teamwork and information sharing, while open and cooperative governance mechanism is the key to effectively pool the protection forces of all parties and improve the protection efficiency.

Communication and Sharing

Safeguarding intangible cultural heritage involves many factors such as culture, management, society, economy, information technology and broadcast. The possibility of relying on single subject, single organization and single resource to solve the problem is getting smaller and smaller. Strengthening cooperation and sharing among safeguarding subjects can reduce waste of resources and improve work efficiency. Taking the construction of information resources as an example, all types of safeguarding units have relatively independent databases and websites, but most databases do not share their information, forming isolated information islands. If each cultural safeguarding unit and individual still fights for each other, they will invest their relatively scarce human and

financial resources into each own repetitive work. Not only are resources wasted and protection inefficient, but the results of their respective safeguarding work are also unusable due to content requirements, different data formats and property rights protection, resulting in a situation where only efforts are made but not widely used. Safeguarding for safeguarding and the safeguarding work itself is regarded as the purpose of safeguarding; only wasting a lot of human and financial resources.

Openness and sharing are the main spirit of the big data era. Internet technology is borderless, distributed, open sharing, connective, and service-oriented. Everyone in the big data environment can be the subject of safeguarding intangible cultural heritage. We need to integrate scattered forces through a relatively unified mechanism and network platform to cope with this grand historical work. The construction and continuous improvement of safeguarding work requires not only extensive participation and support from all parties, but also mutual cooperation and assistance. The Internet platform only provides convenience and possibility for individual protection subjects to work together in the field of safeguarding intangible cultural heritage, while the spirit of cooperation and sharing and the joint working mechanism are the core elements for solving this grand project.

Collaborative Working Mechanism

The government should establish a unified collaborative governance mechanism to pool and coordinate resources from all parties. At present, there are many studies on intangible cultural heritage, but few on public governance and lack empirical research. There is no systematic and unified expression in the cognition of the basic law of intangible cultural heritage development. Different researchers always put forward different views from different aspects on value principles and path choices, and some opinions even have serious confrontations, which makes the systematic and holistic safeguarding practice face the threat of being 'fragmented' [6]. Therefore, in the context of multiple values and path choices, how to establish a corresponding collaborative governance mechanism is a difficult point in safeguarding intangible cultural heritage.

Safeguarding intangible cultural heritage needs to coordinate each institution, including arranging their work scope and coordination mechanism based on their regions, specific tasks and capabilities, and allocating construction resources based on workload. The country or region should establish a unified resource platform and build it based on the public platform, which can avoid a lot of repetitive construction and provide the grass-root units with better technical support. The collaboration mechanism is conducive to the integration of various units to avoid waste of resources, and the follow-up work can be further deepened on the basis of predecessors. Only by encouraging and strengthening the spirit of interconnection and sharing can we overcome localism, information opacity and waste of resources, and promote the rapid and effective integration of various governance units.

Co-construction Inspired by Sharing

Intangible cultural heritage is extremely important to all countries and nations, but this emphasis should not only come from the government. As a former social mainstream culture, intangible cultural heritage has a strong social and public nature, and the public are the basis for the surviving of such social culture. The problem of safeguarding intangible cultural heritage has gradually come to public attention, but it still lacks social enthusiasm. Parts of the safeguarding projects are only to obtain more financial support from all levels of government. For ordinary people, safeguarding work of intangible cultural heritage is still regarded as a new and distant problem by the majority of the public.

The safeguarding and surviving of intangible cultural heritage must collect all social forces. We need to disseminate information through the Internet for the public to understand, share and learn, and we also need gather more information resources based on public participation. The utilization rate of the intangible cultural heritage platform indicates the degree of public concern for this kind of intangible cultural heritage and the recognition of the safeguarding results. In reality, most of the safeguarding tasks are assigned to various cultural protection units [7], but the difficulties of

safeguarding work are enormous and require all beneficiaries of the cultural heritage to bear together and promote the importance of protecting this fragile information heritage in public forums. Only by improving the public's support and understanding of the safeguarding work, and gathering valuable information resources, public opinions, strategic suggestions, material and human resources from all parties, there is hope to prevent constraints such as financial and human resources from hindering the safeguarding work going smoothly.

Collaboration of Technical Standards

There is a variety of file formats for digital acquisition and storage. Each software has a corresponding data format and companies rarely consider software compatibility with others in order to protect their own interests, so collection institutions often have to use a wide variety of digital formats, which not only increases the complexity and maintenance cost of the safeguarding work, but also increases the difficulty of cooperation and sharing among various units, and it is not their original purpose. The most fatal problem is that it brings great security risks. According to the current development speed of digital technology, several years later, users will not know which software to use to read many files currently saved.

A unified technical standard needs to be established for the information of intangible cultural heritage. The format of information file, specification of metadata, and structure of database all require uniform standards in order to effectively integrate the work of all parties into a unified target to promote the efficiency and effectiveness of the safeguarding work. First, the format of data resources must be unified, including text format, image format, video format, and 3D model format. This is an important guarantee for the effective unification of all the work, and it also improves the security of information. Limited format types can reduce the complexity of the entire information database, and greatly reduce the difficulty of future maintenance. Even if there are some changes in the software and hardware environment in the future, only several formats will have 'migration' problems. The second is the unification of descriptive information for data resources, that is, the unification of metadata. Videos, audios and other materials need to be pre-marked for accurate identification and use, overcoming the problem of lower and lower information value density in big data environments. Finally, the unification of database architecture makes it easy for data platforms built by all levels of units to share information. If the database architecture is the same, the technicians of cultural protection unit can conduct standardized training and use, and quickly adapt to different types of digital protection platforms. Of course, different types of intangible cultural heritage have different connotations and expressions, which lead to the difference in information coverage. For example, there is a big difference between traditional handicrafts and folklore. The folklore does not have the 'inheritor' record, but there are many identical parts between them, which can be unified and those different parts can be expressed using a personalized unit. In the same category of intangible cultural heritage, such as handicrafts, we can use the same database organization structure, so that the entire digital safeguarding project can work, communicate and develop under a unified architecture, so the safeguarding work can get rapidly deepened and expanded.

Summary

The development of digital and internet technology offers endless possibilities for the broadcast of intangible cultural heritage, but it is not enough to achieve long-term protection based only on technical strength. In the process of safeguarding intangible cultural heritage, not only at the technical level, but also in the aspects of management mechanism, working style, social dissemination, people education and talent cultivation, should we consider the wide influence of big data and Internet on the surviving of intangible cultural heritage and explore how to build a safeguarding paradigm that is suitable for the current social environment.

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