Management of Folk Songs Resource of Western Hunan's Minorities in the context of big data

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Abstract

The folk songs are the artistic crystallization of multi-ethnic culture in the minority areas of Western Hunan Province and an excellent representative of the intangible cultural heritage of Chinese music. They are rich in resources and distinctive in characteristics with extremely high artistic aesthetic value and cultural research value. The paper takes the management of folk song resources as the research object to analyze the effects on the management of folk song resources brought by the factors of stakeholders, policies, scientific management, information construction, economy, and folk songs from the perspectives of ethnology, art and management. It also explores the optimization strategy and scientific path of resource management based on big data.

Key words: big data; western Hunan's folk songs; folk song resources; resource management

Introduction

Western Hunan is a collective name for the western region of Hunan Province, China. The unique singing art, special singing style, diverse artistic aesthetics and profound cultural value of Western Hunan's folk songs are widely loved by the mass. From 2006 to now, 11 folk songs have been listed in the national intangible cultural heritage protection list and other 15 included in the provincial intangible heritage protection list. In the era of big data, how to scientifically manage the folk song resources with the times to get the precious traditional folk music art out of the predicament and regain its vitality is a matter that the majority of music cultural workers need to pay serious attention to and actively think about.

Research Background

The traditional ethnic culture is a prerequisite for the dependency of each nationality.

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The folk songs are the concrete manifestation of the history, culture, lifestyle and values of minority cultures in western Hunan. the various groups. With the development of the times, the traditional folk songs of ethnic minorities have suffered from the double impact of mainstream social culture and foreign culture in recent years, so their survival and development are facing a serious crisis. In order to better protect and inherit the excellent traditional culture of minority's folk songs, and meet the diverse development of national culture and people's spiritual and cultural aesthetic needs, it's extremely urgent to assist the management of western Hunan's folk song resources by applying the technology of big data.

Problem Statement

The Decreasing Traditional Folk Song Resources: The formation and development of folk songs are intertwined with the production means and living conditions of a certain group, especially related to the folk song's original environment, inheritor, festivals activities and ethnic languages that could protect the inheritance of ethnic cultures. With the rapid development of China's economy and culture, the accelerating pace of urbanization process and national population flow, the original cultural environment on which traditional folk songs depend for survival and development has been gradually reduced or destroyed, leading to the disappearance of traditional folk song festivals and cultural activities. Traditional folk songs, inheritors, ethnic languages, and various written music materials scattered in the civil and other folk songs resources are getting less and less.

The Education of Folk Songs Facing Fault: The folk song is the main tool for people of all ethnic groups in western Hunan to learn their own ethnic knowledge and culture, and spread their ideas and emotions. It is also an important carrier to guide people's production, life and cultural etiquette. With the rapid development of social and cultural technology and the influence of modern online media information, the young generation in the western Hunan has insufficient understanding of the cultural and artistic value of the traditional folk songs around them, and they lack the special learning interest, resulting no successors in the traditional inheritance model of "from father to son" and "oral teaching and extempore creation".

The Narrow Spreading of Folk Songs: Although the folk song resources are extremely rich in western Hunan's minorities, they only have language without any words; moreover, the economic and transportation condition have long been lagging behind, which has hindered the inheritance, spread and development of folk songs, so the rich folk song resources cannot be fully developed and utilized. In recent years, with the rise of China's cultural tourism boom, some tourist attractions started to have ethnic minority song and dance performances. However, these methods have only a transient and symbolic effect on the cultural promotion of folk songs, or they cannot meet the goals of sustainable development and widespread spread of folk song culture.

The Independent and Decentralized of the Management of Folk Song Resources: The management of folk song resources is a huge social project because of the scattered resources and complex content. It involves the development environment, data and information, inheritance personnel, material security and financial funds. However, the declaration of current folk song non-legacy protection project lacks a strict and uniform classification standard. The folk song non-heritage project which originally belongs to the same region or the same type is prone to scramble, fragmentary or repetitive declaration due to the competition relationships. It not only violates the overall principle of the protection and inheritance, but also is not conducive to the unified planning and centralized management of non-legacy resources of folk songs. As a result, the resources like human, financial, material, information, knowledge, and data cannot be effectively integrated and developed for utilization, therefore, the overall management effect of folk song resource is poor.

Research Questions

1. What Ethnic Minority Folk Song Resources are there in Western Hunan?

2. How are the present situation and effect of minorities folk songs resource management in Western Hunan?

3. What are the Main Factors that Influence the Management Effect of Minorities Folk Songs Resources In Western Hunan?

4. How to Optimize the Management of Minority Folk Songs Resources in Western Hunan under the Background of Big Data?

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Research Objectives

1. To combine the Representative Folk Songs Resources of Ethnic Minorities in Western Hunan.

2. To investigate the Current Situation and Effect of Minorities Folk Song Resource Management in Western Hunan.

3. To analyze the Main Factors Affecting the Management Effect of Minorities Folk Songs Resources in Western Hunan

To Put Forward research model and suggestions on Applying Big Data Technology to Optimize the Management Effect of Folk Songs Resources in Western Hunan

Conceptual Framework

As shown in Figure 1, the study discusses the influence of stakeholders, policy, scientific management, information construction, economy, and folk song itself on the source management of folk song by studying the current resource management situation.
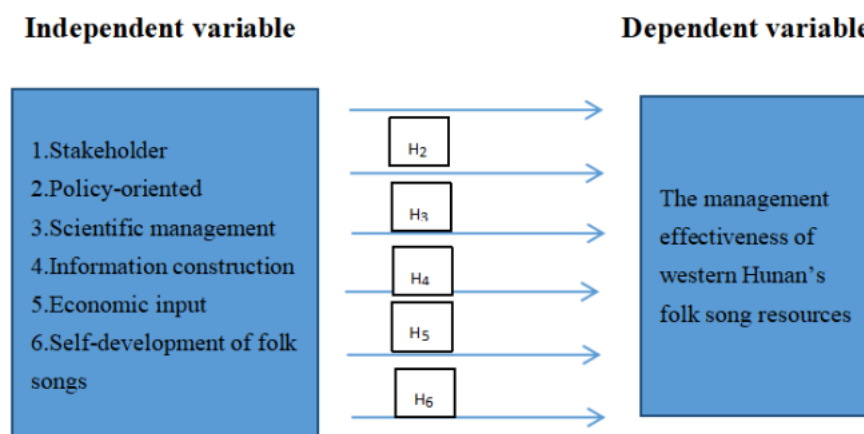

Fig.1 Conceptual framework of management on folk song resource in Western Hunan

Research Hypothesis

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On the basis of reviewing relevant theories and literatures, this paper extracts the factors that affect the management of folk song resources and proposes research hypotheses.

H1 Stakeholder attitudes have a significant impact on the effectiveness of the management of western Hunan's folk song resources

H2 National and local policies and regulations have a significant impact on the management of western Hunan's folk song resources

H3 The scientific management conducted by the management department has a significant influence on the management effectiveness of western Hunan's folk song resources.

H4 The folk song resource information construction has a significant influence on the management effectiveness of western Hunan's folk song resources.

H5 The economic support of government enterprises has a significant influence on the management effectiveness of western Hunan's folk song resources.

H6 The development of traditional folk songs has a significant impact on the management effectiveness of western Hunan's folk song resources.

2. Literature Review

Research on the Investigation and Protection of Folk Song Resources

In *The Integration of Chinese National Folk Songs-Hunan Volume* (1982), it clearly shows the types, quantity, and distribution of minority folk song resources in the western Hunan for the first time in China, which has laid a good foundation for the follow-up research and protection work. Wang Wenming et al. (2012) believed that the intangible cultural heritage in western Hunan had the outstanding characteristics of large quantity, complete variety, high density, strong characteristics, and endangered. It must follow the principle of overall active protection, explore effective protection methods, and maintain the cultural diversity of the region.

Research on the Inheritance and Transmission of Folk Song Culture

Huang Manfang (2010) explored to introduce the original ecological folk songs from

western Hunan ethnic minorities into professional classrooms by using folk music resources, highlighting regional ethnic characteristics in teaching based on the experience of vocal music reform in Jishou University. Meng Lingling (2019) pointed out that the introduction of the concept of big data into the development strategy of Guangxi folk songs will greatly expand the resource information of traditional folk songs, the method of spreading folk songs is more efficient and convenient, and the audience is more targeted, which can greatly increase the influence of folk songs of Guangxi minorities.

Research on Modern Management of National Culture

Tang Jing (2011) proposed specific strategies for the integration of tourism resources by taking the integration of tourism resources in Huaihua of western Hunan as the core of research. Li Ran (2014) discussed the management model and problems to develop and protect villages of ethnic minorities in western Hunan and the role of the government and enterprises in the development of villages with ethnic minorities, and their special roles in the protection of traditional culture. Moreover, specific opinions and suggestions have been put forward on the "endogenous" development of ethnic villages.

The previous researches on folk songs of western Hunan are rich in achievements and diverse in perspective, and present the situation that the special research keep pace with the comprehensive research, which provides a good theoretical reference for the follow-up research.

Methodology

If studying the management of folk song resources in minority groups of western Hunan, scientific analysis and explanation on the basis of sufficient data should be carried out so as to grasp the general development rules.

Questionnaire Design

The questionnaire is designed based on previous research results and summarized after talking with relevant personnel. The design of the questionnaire in this paper includes the factors of policy, economy, management, individual, technology and folk

songs that influence the management effect of folk song resource in western Hunan, as well as attitude survey on the management of folk song resources. The respondent adopts a 5-point Likert scale to answer 35 items.

Data Collecting Method

The most valuable information of the research can be obtained by collecting data, and the content of the answer sheet can be generated in a digital form, which is a direct expression of the interviewee's attitude, so that the researcher can accurately summarize the results. This study adopts quantitative research method to obtain information by issuing questionnaires.

Sampling

The researchers distributed the questionnaire to the audience of folk songs. The survey subjects include people of different genders, nationalities, cultural backgrounds and incomes. The survey sites are local universities, mass cultural activities halls, tourist attractions, and folk song protection areas. A total of 400 questionnaires were issued for different types of people, and 380 valid questionnaires were collected.

Data Analysis Method

35 items are involved in the research. 400 questionnaires are distributed according to the formula of taro Yamani,. The questionnaire started on August 1, 2019, and ended on October 1, 2019. It was distributed in more scattered places with the purpose of obtaining more information of different types of people. A total of 400 questionnaires were distributed, and 390 were recovered, with a recovery rate of 97.5%. There are 380 valid answers, with an effective rate of 95%.

Reliability Analysis

After the statistical validity and distribution mode of the sample data meet the basic requirements, the study also needs to test the reliability and validity of the questionnaire. In this study, the formal sample data collected by the questionnaire survey was used to analyze the 35 items by using spss22.0 software. The specific results are shown in Table 1.

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Table 1 Reliability test of the questionnaire

Reliability statistics

Variables	Items	Cronbach's Alpha
Stakeholder factor	5	0.866
Policy measure factor	5	0.877
Scientific management factor	5	0.887
Information construction factor	5	0.889
Economic input factor	5	0.873
Folk songs factor	5	0.876
The management effectiveness of folk songs	5	0.842
Total reliability	35	0.932

The researchers firstly processed and analyzed the data collected by the questionnaire, and found that the overall Cronbach's Alpha coefficient value of the scale was greater than 0.9, indicating that the internal consistency of the questionnaire was good, so the reliability of the results was very good.

Validity test

According to the analysis results in Table 2, the KMO value is 0.914, significantly greater than 0.9; while in the Bartley sphere test, the approximate chi-square value is 7608.109, and the significance probability is 0.000, less than 0.01. Therefore, the null hypothesis of the Bartley sphericity test is rejected, indicating that the questionnaire has a good validity structure and can be factored.

Table 2 Validity test of the questionnaire

Table 2 KMO and Bartlett Tests		
Kaiser-Meyer-Olkin metric with sufficient sampling		.914
Bartlett sphericity test	Approximate chi-square	7608.109
	df	595
	Sig.	.000

Regression analysis

It shows the standardized regression coefficient of the model independent variable is less than 0.05 in Table 3, which passes the significance test. According to the regression equation, the independent variable has a significant positive effect on the dependent variable.

Table 3 Analysis of influencing factors of folk song resource management

Model	Unstandardized coefficient		Standardized coefficient	t	Significance	R2	Adjusted R2	F
	B	Standard error	Beta					
(Constant)	2.400	0.133		18.073	0.000	0.151	0.149	67.318**
Individual factor	0.333	0.041	0.389	8.205	0.000			
(Constant)	2.342	0.123		19.023	0.000	0.189	0.187	88.211**
Policy factor	0.357	0.038	0.435	9.392	0.000			
(Constant)	2.347	0.126		18.565	0.000	0.179	0.177	82.581**
Organization factor	0.349	0.038	0.423	9.087	0.000			
(Constant)	2.406	0.122		19.733	0.000	0.175	0.173	80.134**
Technology factor	0.330	0.037	0.418	8.952	0.000			
(Constant)	2.310	0.128		18.066	0.000	0.185	0.183	85.852**
Economy factor	0.363	0.039	0.430	9.266	0.000			
(Constant)	2.432	0.132		18.358	0.000	0.144	0.142	63.688**
Folk song factor	0.322	0.040	0.380	7.980	0.000			

According to Table 4, the adjusted R2 of the model is 0.366, and the F value is 37.432, indicating that the model has a good degree of fitting, and there is a linear correlation between the dependent variable and the independent variable. The standardized regression coefficients of the independent variables of the model are 0.146, 0.198, 0.160, 0.106, 0.173, 0.124, and the sig value is less than 0.05, which passes the significance test. According to the regression equation, the independent variable has a significant positive effect on the dependent variable.

Table 4 Analysis of the influence of main independent variables on the management of folk song resources

Analysis of the influence of main independent variables on the management of folk song resources								
Model	Unstandardized coefficient		Standardized coefficient	t	Significance	R²	Adjusted R²	F
	B	Standard error	Beta					
(Constant)	1.092	0.162		6.749	0.000	0.376	0.366	37.432**
Stakeholder factor	0.125	0.040	0.146	3.129	0.002			
Policy factor	0.162	0.039	0.198	4.154	0.000			
Scientific management factor	0.132	0.039	0.160	3.356	0.001			
Information construction factor	0.084	0.040	0.106	2.114	0.035			
Economy factor	0.146	0.041	0.173	3.573	0.000			
Folk song factor	0.105	0.040	0.124	2.633	0.009			
a. dependent variables: resource management of the folk songs								

Investigation Result and Research

1. Information Statistics of Population Sample

See Table 5 for sample distribution information. Through frequency analysis, it can be found that the distribution of gender samples is mainly "female", accounting for 51.58%; the distribution of age samples is mainly "18-35 years old", accounting for 39.74%; the distribution of ethnic samples is mainly "Han", accounting for 91.05%; the distribution of samples in education background is "undergraduate", accounting for 46.05%; the current sample of annual income status is mainly based on "4.1-9 million", accounting for 42.63%; 40.26 %of sample likes folk songs .

Table 5 Descriptive statistics of the sample

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		Frequency	Percentage	Valid percentage	Cumulative percentage
Gender	Male	184.00	48.42	48.42	48.42
	Female	196.00	51.58	51.58	100.00
	Total	380.00	100.00	100.00	
Age	Under 18	40.00	10.53	10.53	10.53
	18-35	151.00	39.74	39.74	50.26
	36-50	124.00	32.63	32.63	82.89
	Above 50	65.00	17.11	17.11	100.00
	Total	380.00	100.00	100.00	
Nationality	Han	346.00	91.05	91.05	91.05
	Tujia	15.00	3.95	3.95	95.00
	Miao	10.00	2.63	2.63	97.63
	Others	9.00	2.37	2.37	100.00
	Total	380.00	100.00	100.00	
Education background	Senior high and below	39.00	10.26	10.26	10.26
	Junior college	110.00	28.95	28.95	39.21
	Bachelor	175.00	46.05	46.05	85.26
	Master and above	56.00	14.74	14.74	100.00
	Total	380.00	100.00	100.00	
Current annual salary	40,000 and below	60.00	15.79	15.79	15.79
	41000 to 90000	162.00	42.63	42.63	58.42
	91000 to 140000	124.00	32.63	32.63	91.05
	141000-190000	34.00	8.95	8.95	100.00
	Total	380.00	100.00	100.00	
Preference on folk songs of western Hunan	Totally dislike	24.00	6.32	6.32	6.32
	Dislike	41.00	10.79	10.79	17.11
	Neutral	76.00	20.00	20.00	37.11
	Like	153.00	40.26	40.26	77.37
	Like very much	86.00	22.63	22.63	100.00
	Total	380.00	100.00	100.00	

2. Analysis of Factors Affecting the Management of Western Hunan's Folk Song Resources

The Influence of National and Local Policies and Regulations on the Resources Management of Folk Songs

According to Table 3, the adjusted R^2 of the model is 0.187, and the value of F is

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88.211, indicating that the model has a good degree of fitting, and there is a linear correlation between the dependent variable and the independent variable. The standardized regression coefficient of the model independent variable is 0.435, and the sig value is less than 0.05, which passes the significance test. Moreover, according to the regression equation, the independent variable has a significant positive effect on the dependent variable, which shows that national and local policies and regulations have a significant impact on the management effectiveness of folk song resources.

Restricted by geographical conditions, the minority nationalities in western Hunan lag behind developed regions in terms of economic concept and social capital, and the market mechanism has not yet been fully formed. Their protection and development of own cultures are weak. The government's policy orientation and development preferences will have a great impact on the economic and cultural development of ethnic minority areas.

The Influence of Financial and Economic Support on the Management of Folk Song Resources

According to Table 3, the adjusted R2 of the model is 0.177, and the value of F is 80.134, indicating that the model has a good degree of fitting, and there is a linear correlation between the dependent and independent variables. The standardized regression coefficient of the model independent variable is 0.418, and the sig value is less than 0.05, which passes the significance test. Moreover, according to the regression equation, the independent variable has a significant positive effect on the dependent variable.

The relationship between economy and culture is very close. The development of social economy restricts the development of culture and art education,the development of culture and art education plays an active role in promoting the development of local regional economy and culture and art. The inheritors' living subsidies, management personnel's census to the countryside, project declaration, research and training, etc., are all inseparable from the financial support. It can be seen that the capital investment has a significant impact on the management of folk song resources.

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The Influence of Scientific Management Conducted by Management Department on the Management of Folk Song Resource

According to Table 3, the adjusted R^2 of the model is 0.177, and the value of F is 82.581, indicating that the model has a good degree of fitting, and there is a linear correlation between the dependent and independent variables. The standardized regression coefficient of the model independent variable is 0.423, and the sig value is less than 0.05, which passes the significance test. Moreover, according to the regression equation, the independent variable has a significant positive effect on the dependent variable.

More specific methods and means are provided by the modern management methods in the team building, incentive system, project operation, talent selection, and investment management of folk song resources. Scientific management measures and objective performance appraisal can better monitor the authority and effectiveness of the policies and regulations of ethnic non-legacy culture, test and evaluate the management effectiveness of folk song resources, and truly implement and improve the scientific management of minority folk song resources.

The Influence of Stakeholders' Personal Quality on Management of Folk Song Resources

According to Table 3, the adjusted R^2 of the model is 0.149, and the value of F is 67.318, indicating that the model has a good degree of fitting, and there is a linear correlation between the dependent and independent variables. The standardized regression coefficient of the model independent variable is 0.389, and the sig value is less than 0.05, which passes the significance test. Moreover, according to the regression equation, the independent variable has a significant positive effect on the dependent variable.

It's required professionals with high quality, professional skills, deep feelings and passion for traditional folk song culture to manage the folk song resources. If there are no professional management talents in the management department or scientific management measures are not adopted, it will become a formality or lead to low efficiency on the management of folk song resource, which is not conducive to the

smooth operation and the protection and inheritance of folk song culture.

The Influence of Information Construction of Folk Song Resources on the Management of Folk Song Resources

According to Table 3, the adjusted R2 of the model is 0.177, and the value of F is 80.134, indicating that the model has a good degree of fitting, and there is a linear correlation between the dependent and independent variables. The standardized regression coefficient of the model independent variable is 0.418, and the sig value is less than 0.05, which passes the significance test. Moreover, according to the regression equation, the independent variable has a significant positive effect on the dependent variable.

The rapid development of network information technology has realized the digital storage, dissemination, sharing and utilization of folk song resources, and it's the best choice to let digital technology assist the management of folk song resources. In order to better protect the inheritance and promotion of the folk song culture of the minority people in western Hunan, it is necessary to make full use of the technical advantages of modern online media, actively build a folk song network resource library and data processing center, and develop online courses and cultural promotion websites.

The Influence of the Development of Folk Song on Its Resource Management

According to Table 3, the adjusted R2 of the model is 0.142, and the value of F is 63.688, indicating that the model has a good degree of fitting, and there is a linear correlation between the dependent and independent variables. The standardized regression coefficient of the model independent variable is 0.380, and the sig value is less than 0.05, which passes the significance test. Moreover, according to the regression equation, the independent variable has a significant positive effect on the dependent variable.

The folk songs are the artistic crystallization of the multi-ethnic culture in western Hunan, and also a cultural window for understanding the working life, thoughts and feelings of the minority people. Therefore, it must advance with the times and move towards the stage of multiculturalism in the world, which cannot do without the innovation and development of folk songs themselves.

Conclusion and Suggestions

According to Table 3, all independent variables have a positive effect on the dependent variables, and 6 hypotheses are verified. 6 factors such as the attitude ability of folk stakeholders, national and local policies and regulations, scientific management conducted by the management department, information construction of folk song resources, economic support from government enterprises and the development of traditional folk songs have a significant impact on the management of western Hunan's folk song resources.

Suggestions

Support and guide by policies, increase economic investment

It is necessary to expand the participation channels, and encourage people from all walks of life to participate together. Consultation, argumentation, supervision, and evaluation procedures in the process of policy formulation and implementation will be further improved, increase financial investment in resource management through financial investment, corporate financing and private fundraising, provide good economic, cultural and educational policy support for minority areas in western Hunan, and promote the comprehensive development of folk song resource management.

Strengthen education and training, improve protection awareness

Attach importance to the folk inheritance method played by the old artists, improve the public's protection awareness of folk song culture, and expand the inheritance team. It emphasizes the mainstream approach of school education inheritance, and actively shoulders the heavy responsibility of inheritance. Integrate folk songs as an indispensable part of school music education into conventional teaching, and actively develop local folk songs courses, school-based textbooks of folk songs and online teaching, So as to better protect and develop folk songs resources.

Data information construction, resource linkage management

Subsequent research suggestions are related to the relevant research topics of information technology experts. The opinions of information technology experts on data analysis, software development, technology utilization, and information

dissemination of folk song resources will directly affect its protection, dissemination, development, and utilization.

Research Limitations and Suggestions

The paper is directed to analyze management of folk song resources in western Hunan, because different nationalities, regions, and economic construction will lead to different song resource management. The conclusion of this study can only demonstrate the management of folk song resource in western Hunan region. It cannot represent the overall picture of the management of all folk songs in China.

Information technology experts can provide more comprehensive and in-depth technical support and software applications for similar topics in the future research. In the context of the era of big data, the opinions and suggestions from information technology experts on data analysis, software development, technology utilization and information dissemination of folk song resource management will directly affect its practical effect

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