Youth's Willingness to Inherit and Revitalize Yingge Dance in Jieyang City: A Structural Equation Modeling Approach

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Abstract. Yingge Dance, an integral part of the intangible cultural heritage of the Chaoshan region in Guangdong Province, plays a crucial role in reinforcing cultural confidence and promoting the sustainable development of human society. Along with the widespread influence of the "Xiaoshiqian" incident, the Yingge Dance has gained increasing recognition. Nevertheless, as a traditional folk dance, it faces a significant challenge due to insufficient inheritors and a lack of innovation. In this study, we aim to enhance public willingness to inherit and explore new paths for Yingge Dance development by investigating young people's perceptions of its performance, inheritance, and the potential for innovative inheritance paths in Jieyang City. Using the Structural Equation Model (SEM) to analyze 700 valid questionnaires, we found that respondents possess a certain understanding of Yingge Dance, with the majority considering it an extraordinary piece of intangible cultural heritage with a favorable view of it. Despite the high inheritance willingness of Yingge Dance among the youth in Jieyang City, their willingness is influenced by various factors, such as time constraints, financial limitations, energy expenditure, and the attractiveness of cultural and creative products. To facilitate the inheritance of Yingge Dance effectively, it is imperative to address these challenges by offering more flexible schedules, financial support, appropriate training venues, and developing attractive cultural and creative products. The current level of cognitive awareness among young people in Jieyang City regarding Yingge Dance positively influences their willingness to inherit. Therefore, enhancing their understanding and awareness is essential to overcoming obstacles encountered in the inheritance process. The findings of this research have significant implications for the innovative inheritance of Yingge Dance.

Keywords: Yingge Dance, intangible cultural heritage, Chaoshan region, structural equation modeling

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1 Introduction

Yingge Dance, as a highly cohesive form of intangible cultural heritage, boasts the rich traditions and unique cultural values of the Chaoshan region. Integrating elements of dance, southern-style boxing, and traditional opera, Yingge Dance is renowned as the "Chinese War Dance." Despite its historical challenges, including a dwindling number of inheritors, a lack of innovation, and difficulties in sustaining its vitality in contemporary society, the 2024 Yingge Dance Exhibition and Parade garnered substantial attention through its live broadcast across numerous media platforms, showcasing its broad appeal and potential for widespread dissemination. This event has spurred reflections on strategies to further promote and innovate Yingge Dance through modern communication channels.

Yu and Mei's exploration of dance improvisation offers an alternative approach to understanding the archaeological heritage sites beyond the theoretical introductory knowledge [1]. The adaptive reuse of industrial heritage has gained significant acceptance in developing countries, providing economic, cultural, and social benefits to urban communities [2-3]. Scholars have also identified historic villages as a nonrenewable component of our cultural heritage, vulnerable to the impacts of modern production methods and lifestyles. These historic villages necessitate various conservation measures, and their preservation requires post-planning evaluation [4-5]. Research on the origin and characteristics of Yingge Dance, as well as its current status, has been conducted by several scholars [6-8].

In summary, scholars' research on intangible cultural heritage (ICH) primarily focuses on the following three directions: (1) Inheritance Willingness: Scholars delve into the willingness of individuals or communities to inherit ICH, examining factors that influence this willingness, such as sociocultural, economic, and educational aspects. They aim to understand the motivations and barriers behind inheritance practices and propose strategies to enhance the enthusiasm and commitment towards perpetuating ICH.(2)Revitalization Pathways: Researchers explore innovative methods and approaches for revitalizing ICH, ensuring its continued relevance and vitality in contemporary society. This includes utilizing digital technologies for preservation and dissemination, integrating ICH into creative industries for economic and cultural growth, fostering community participation for living inheritance, and incorporating ICH into educational curricula to cultivate future generations of inheritors. (3) Challenges and Solutions: Scholars also identify the challenges facing ICH inheritance and revitalization, such as the aging of inheritors, declining interest among younger generations, and insufficient market demand. They strive to develop effective solutions and strategies to address these challenges, ensuring the sustainable transmission and development of ICH for future generations.

Despite the increasing interest, research on Yingge Dance remains relatively sparse, often subsumed under broader cultural heritage studies, with limited focus on its specific inheritance and development. In this study, we seek to address this gap by examining the awareness and attitudes of the youth in Jieyang City towards Yingge Dance, specifically their understanding of its cultural connotations, performance forms, and willingness to inherit. Employing SEM in this research, we aim to identify key areas

for improvements, enhance youth engagement with the art form, promote the integrated development of cultural tourism, and explore sustainable paths for its enduring popularity.

2 Research Hypothesis and Model Construction

2.1 Research Hypothesis

As illustrated in Figure 1, the current status of performance cognition and inheritance cognition are hypothesized to influence both the willingness to inherit and the willingness to explore new paths of inheritance. By analyzing the path coefficients between these variables, we can ascertain the degree of influence each latent variable exerts on the willingness to inherit and the willingness to explore new inheritance paths.

The current situation of performance awareness influences the willingness to explore new paths of inheritance from several perspectives. Individuals with profound knowledge of performing arts are often better equipped to discern the essence and limitations within traditional performances, thereby stimulating their innovative thinking and motivating them to consider new avenues for performing arts. When audiences or practitioners possess a heightened awareness of performing arts, they tend to be more receptive to novel performance forms and inheritance methods. Increased awareness of performing arts prompts individuals to engage more actively in related communication and learning activities, continually broadening their horizons and acquiring new insights. The specific hypothesis is as follows:

H1: The current situation of performance awareness positively influences the willingness to explore new paths of inheritance.

Inheritance awareness influences the willingness to explore new paths of inheritance can be comprehended from the following aspects. When individuals possess a profound understanding of a particular tradition cultural heritage, they are better able to recognize the value, significance, and challenges associated with this heritage. Those with a higher level of heritage awareness tend to possess a more open mindset and innovative thinking. This openness and innovativeness serve as vital driving forces in exploring new paths of inheritance. The specific hypothesis is as follows:

H2: The current status of inheritance awareness positively influences the willingness to explore new paths of inheritance.

Performance awareness positively influences the willingness to inherit can be interpreted from the following aspects. This appreciation and recognition foster a positive attitude towards the protection and transmission of performing arts. Recognizing the uniqueness of a particular performance form, they cherish it more and desire its continuation. Performing arts often touch people's hearts, evoking emotional resonance among audiences. When individuals have a deep understanding of performing arts, they are more likely to find elements that resonate with their life experiences, cultural backgrounds, or emotional states within the performances. The specific hypothesis is as follows:

H3: The current state of performance awareness positively influences the willingness to inherit.

Inheritance awareness influences the willingness to inherit can be comprehended from the following aspects. Recognizing the importance of their actions in preserving and promoting these invaluable heritages, they are more inclined to devote time and effort to learning and transmitting them. Profound understanding is often accompanied by emotional connection and identification. When individuals experience an emotional resonance with a certain transmission content, they cherish and respect these cultural heritages even more. The specific hypothesis is as follows:

H4: The current status of inheritance awareness positively influences the willingness to inherit.

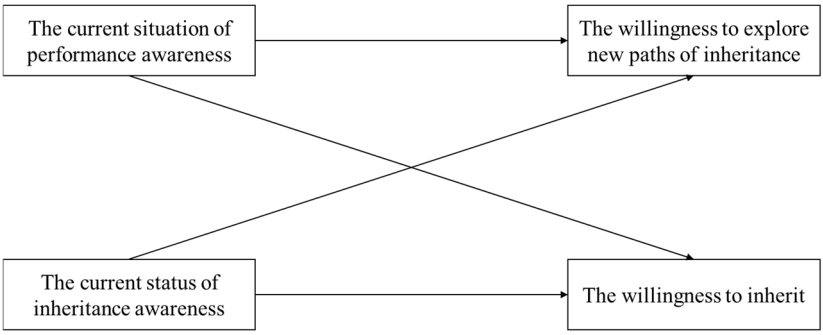

Fig. 1. Structural equation model.

2.2 Structural Equation Modeling

SEM comprises two main components: the measurement model and the structural model. The measurement model is represented as follows:

$$\begin{cases} X = \Lambda_x \xi + \delta \\ Y = \Lambda_y \eta + \varepsilon \end{cases} \tag{1}$$

$$\eta = B\eta + \Gamma\xi + \zeta \tag{2}$$

In this formula, X represents the vector of exogenous variables, Y denotes the vector of endogenous variables, Λ_x represents the factor loading of X, Λ_y stands for the factor loading of Y, ξ and η are the vector of exogenous latent variables and the vector of endogenous latent variables, respectively, δ and ε denote the vector of measurement errors, and B and Γ represent the factor-path coefficients matrices.

3 Data Sources and Variable Design

3.1 Data Sources

To ensure a representative sample, stratified and three-stage sampling methods were employed to conduct probability sampling among youth groups in six counties (cities

and districts). A total of 741 research questionnaires were distributed, with 700 valid questionnaires ultimately obtained, resulting in an effective rate of 94.5%.

3.2 Variable Design

SEM was applied to explore the relationships among four latent variables: performance awareness, inheritance awareness, inheritance willingness, and willingness to explore new paths of inheritance. These latent variables, which could not be directly measured, were represented by their corresponding 23 observed variables, as detailed in Table 1.

Table 1. Latent and observed variables.

Latent variable	Observed variables	Description
The situation of performance awareness	BY1	Distinctive artistic characteristics
	BY2	Strong folk customs, red-hot and lively
	BY3	Crystallization of national wisdom, strong patriotic feelings
	BY4	Regional characteristics
	BY5	A sense of cultural identity and pride
	BY6	Dazzling, repetitive, and boring
Status of inheritance awareness	CCRZ1	A single channel of publicity
	CCRZ2	Lack of innovation, old forms, and a single form of performance
	CCRZ3	Inheritance problems, broken talents, limited inheritance and development
Willingness to inherit	CCYY1	Participate in Yingge Dance-related thematic activities
	CCYY2	Watching related books and videos
	CCYY3	Promote and recommend Yingge Dance to others
	CCYY4	Participate in the protection and inheritance of Yingge Dance
	CCYY5	Become an inheritor of this non-genetic heritage
Willingness to explore new paths of inheritance	LJTS1	I like Yingge Dance very much
	LJTS2	I am willing to participate in the exploration of new inheritance paths
	LJTS3	I think it is meaningful to innovate Yingge Dance
	LJTS4	The general public/social media have been very positive about Yingge Dance
	LJTS5	I would be influenced by those who explore new paths
	LJTS6	The media and advertising have influenced my willingness to revitalize Yingge Dance
	LJTS7	I am interested in revitalizing Yingge Dance
	LJTS8	I am aware of some of the new paths that have been explored so far
	LJTS9	It is easy to gather information about revitalizing Yingge Dance

4 Data Analysis

4.1 Reliability and Validity Analysis

The reliability coefficient of the data was assessed using Cronbach's alpha, while validity was evaluated through the Kaiser-Meyer-Olkin (KMO) test and Bartlett's test of sphericity. The reliability coefficients for the four latent variable factors exceeded 0.900, with an overall reliability coefficient of 0.972, which meets the standards required for structural equation modeling. A KMO value greater than or equal to 0.6 indicated the appropriateness of factor analysis. Principal component analysis was conducted to examine the variance explained by each principal component, as shown in Table 2. It was found that in the principal component extraction for the 27 variables, four factors had eigenvalues greater than 1, cumulatively explaining 75.552% of the variance variance. The rotated factor loading matrix is presented in Table 3, illustrating the distribution of loadings across the components.

Table 2. Principal component variance interpretation.

Component	Total	Initial eigenvalue variance percentage	Cumulative %	Total	Rotational load sum of squares variance percentage	cumulative %
1	15.271	54.541	54.541	6.438	22.994	22.994
2	2.835	10.124	64.665	5.697	20.345	43.339
3	2.042	7.294	71.958	4.805	17.16	60.499
4	1.025	3.661	75.619	4.215	15.053	75.552
5	0.545	1.946	77.565			
6	0.492	1.758	79.323			
7	0.454	1.623	80.946			
8	0.411	1.47	82.416			
9	0.383	1.367	83.783			
10	0.366	1.307	85.090			
11	0.345	1.232	86.322			

Table 3. Rotated factor loading matrices.

	Component			
	1	2	3	4
B5 Distinctive artistic characteristics	0.253	0.871	0.269	0.274
B5 Strong folk customs	0.260	0.879	0.273	0.272
B5 Crystallization of national wisdom	0.251	0.871	0.269	0.268
B5 Regional characteristics	0.249	0.870	0.276	0.271
B5 Cultural identity	0.240	0.871	0.268	0.266
B5 Repetitive and boring	0.245	0.889	0.269	0.267
B8 Single form of performance	0.441	0.352	0.637	0.342
B8 Problems of inheritance	0.454	0.315	0.689	0.348

B8 Single propaganda channel	0.4370.3390.6990.331
B8 Participate in theme activities	0.4320.3470.6770.355
B8 Watching related books and videos	0.4490.3150.6620.343
B8 Promote and recommend to others	0.4490.3270.6520.356
B8 Participate in protection and inheritance	0.4500.3390.6460.347
B8 Become an inheritor	0.4580.3190.6760.351
C3 Degree of liking	0.7210.2370.3500.221
C3 Willingness to explore new paths	0.7450.2460.3280.256
C3 Inheritance way innovation is meaningful	0.7130.2170.3740.264
C3 Evaluation is very good	0.7430.2310.3330.237
C3 Influenced by others to explore	0.6410.2670.3700.224
C3 Influence of media and advertising on revitalization	0.7620.2110.3300.258
C3 is interested in heritage methods	0.7170.2630.3160.287
C3 Knows some new paths to heritage	0.6900.2800.3440.236
C3 It is easy to collect information about revitalization	0.7440.2170.3120.343
D1 Watching the video about "Hourly Migration" on the internet	0.3350.4430.2910.878
D1 Learning about the characteristics of Yingge Dance through Hourly Migration	0.3560.4320.2860.892
D1 Friends and relatives are also interested in "Hourly Move" related videos	0.3870.4450.2750.899
D1 Visiting "Hourly Migration" offline	0.3390.4670.2540.898

4.2 Fitness Test

Using AMOS26.0 software, the path was drawn as represented in Figure 2. The chi-square degrees of freedom (CMIN/DF) value of 1.255 indicates an acceptable model fit, with lower values reflecting a better fit. The goodness of fit index (GFI), comparative fit index (CFI), normal fit index (NFI), and Tucker-Lewis index (TLI) suggest that the structural model accurately represents the measurement data, as shown in Table 4. CMIN/DF is the chi-square to degrees of freedom ratio, used to assess the goodness of fit between a model and the data. A lower CMIN/DF value indicates a better fit between the model and the data. GFI is the Goodness of Fit Index, which measures the proportion of variability in the data that is accounted for by the model. The value of GFI ranges from 0 to 1, with values closer to 1 indicating a better fit. CFI is the Comparative Fit Index, a measure used to evaluate the goodness of fit of a statistical model. The value of CFI ranges from 0 to 1, with values closer to 1 indicating a better fit. NFI is the Normed Fit Index, similar to GFI but with a penalty for model complexity. The value of NFI also ranges from 0 to 1, with values closer to 1 indicating a better fit. TLI is the Tucker-Lewis Index, another measure of comparative fit that considers the complexity of the model. The value of TLI ranges from 0 to 1, with values closer to 1 indicating a better fit.

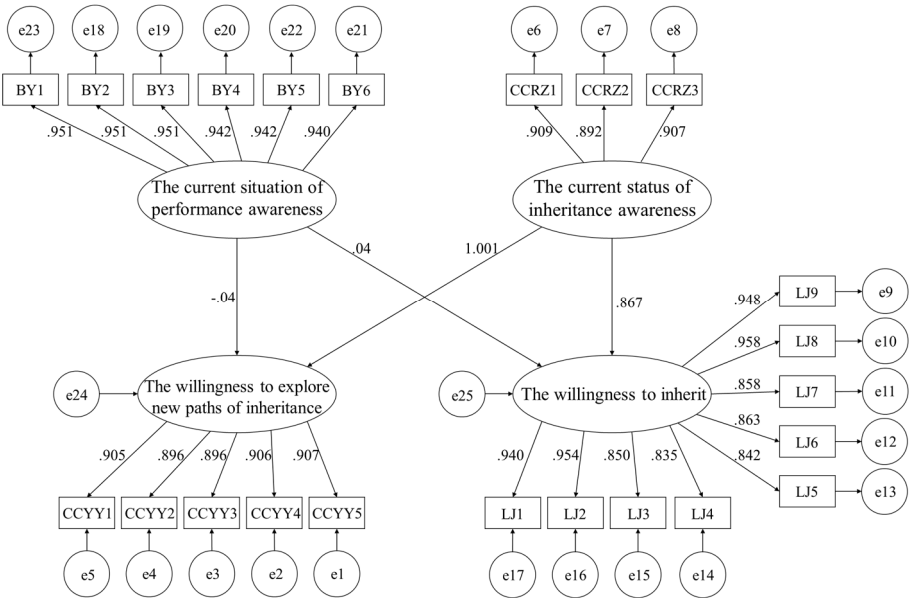

Fig. 2. Structural equation modeling relationship path.

Table 4. Evaluation of model fitness.

Fitting index	Acceptable range	Measured value	Conformity to standard
CMIN/DF	<3	1.255	Yes
GFI	>0.9	0.987	Yes
RMSEA	<0.1	0.019	Yes
CFI	>0.9	0.997	Yes
NFI	>0.9	0.987	Yes
TLI	>0.9	0.997	Yes

4.3 Results

The analysis reveals a significant relationship between the current status of inheritance cognition and the willingness to explore new paths of inheritance, where the path coefficient is 0.867, as shown in Table 5. This indicates that a one-percentage-point increase in inheritance cognition leads to a 0.867 percentage-point increase in the willingness to explore new inheritance paths. The factor loading of "strong folklore" is 0.879, with the greatest latent variable, reflecting that the majority of all survey participants perceive Yingge Dance as having robust folkloric cultural characteristics. Among the variables measuring willingness to explore new inheritance paths, the factor loading for "influence of media and advertisements on revitalization" is 0.762, suggesting that increased media promotion and advertising efforts can significantly enhance public willingness to explore new inheritance paths.

The path coefficient between the current status of inheritance cognition and the willingness to inherit is 1.001, with a p-value of 0.000. It suggests that a one-percentage-point increase in inheritance cognition results in a 1.001 percentage-point increase in willingness to inherit. This indicates that enhanced media promotion and non-heritage cultural education can thus improve the public's cognition of Yingge Dance, thereby increasing their willingness to inherit it. The factor loading for "participation in related activities" is 0.677, indicating its substantial influence and importance in the factors of the willingness to inherit.

Conversely, the p-value between the current status of performance cognition and the willingness to inherit is 0.851, rendering this path invalid. Similarly, the p-value between the current status of performance cognition and the willingness to explore new inheritance paths is 0.912, also indicating an invalid path.

Table 5. Model estimation results.

	Path relationship	Standardized coefficient	Standard error	p-value
H1	Performance cognition → Inheritance willingness	-0.004	0.015	0.851
H2	Inheritance cognition → Willingness to inherit	1.001	0.030	0.000***
H3	Performance cognition → Willingness to explore inheritance paths	0.004	0.019	0.912
H4	Inheritance cognition → Willingness to explore new paths of inheritance	0.867	0.032	0.000***

(The asterisks *** denote that p-value is less than 0.01)

5 Conclusion

The findings demonstrate that the youth in Jieyang City possess a notable understanding of Yingge Dance and largely regard it as an exemplary intangible cultural heritage, worthy of inheritance and development. Despite this high willingness to inherit the Yingge Dance, the youth's commitment is influenced by several factors, including time, financial constraints, energy, and the appeal of cultural and creative products. To promote the effective inheritance of Yingge Dance, it is imperative to address these challenges by providing more flexible scheduling, financial support, suitable training venues, and developing attractive cultural and creative products. The current cognitive status of the youth in Jieyang City regarding Yingge Dance positively impacts their willingness to inherit it. Therefore, enhancing this cognitive status is a crucial step in addressing the challenges faced in the inheritance process. Detailed explanations of the specific mechanisms for exploring new transmission paths stem from several crucial aspects. (1) Changing Consumer Behavior: Media and advertising play a pivotal role in shaping consumer preferences, attitudes, and behaviors. As society evolves and technology advances, people's willingness to try new ways of consuming information, products, or services is often influenced by the messages they receive through various media channels. Innovation Diffusion: The process of how new ideas, technologies, or prod-

ucts spread through a population is known as innovation diffusion. Media and advertising are powerful tools that can accelerate this process by creating awareness, generating interest, and fostering acceptance of new transmission paths. (2) Cultural and Social Norms: Media and advertising often reflect and reinforce cultural and social norms, which can significantly impact individuals' willingness to explore new transmission paths. By delving deeper into these influences, we can gain a better understanding of how societal beliefs and values shape our acceptance of new technologies or communication methods. (3) Marketing and Advertising Strategies: Businesses rely heavily on media and advertising to reach their target audiences and persuade them to adopt their products or services. Analyzing the effectiveness of these strategies in fostering curiosity and openness to new transmission paths can help marketers develop more effective campaigns.

The research proposes several improvement measures to tackle the existing issues related to Yingge Dance, seeking to elevate awareness among the youth. In this research, we advocate for the integrated development of cultural tourism for Chaoshan Yingge Dance and explore sustainable paths for its continued popularity beyond its initial "viral" success. However, the study has certain limitations. The research sample is relatively concentrated, consisting solely of young people from Jieyang City, which restricts the broader applicability and statistical significance of the findings. Future research should aim to expand the data to encompass the entire Chaoshan region, include a larger and more diverse population, and enhance the pertinence and effectiveness of the proposed countermeasures and suggestions.

References

1. Yu Hua and Mei Jiaoyin. Dance improvisation as an embodied encounter with heritage site: a case in the archaeological ruins of Liangzhu [J]. International Journal of Heritage Studies, 2024, 30(5): 597-611.
2. Samadzadehyazdi Sepideh. Significance of authenticity: learning from best practice of adaptive reuse in the industrial heritage of Iran [J]. International Journal of Architectural Heritage, 2020, 14(3): 329-344.
3. Ping Guo. Quantifying the core driving force for the sustainable redevelopment of industrial heritage: implications for urban renewal [J]. Environmental Science and Pollution Research, 2021, 28(35): 1-15.
4. Huang Yi, Li Erwei and Xiao Dawei. Conservation Key points and management strategies of historic villages: 10 cases in the Guangzhou and Foshan Area [J]. Journal of Asian Architecture and Building Engineering, 2022, 21(4): 1320-1331.
5. Guokai Li. Architectural Cultural Heritage Conservation: Fire Risk Assessment of Ancient Vernacular Residences Based on FAHP and EWM [J]. Applied Sciences, 2023, 13(22).
6. Huang Si. Cultural Connotation and Aesthetic Meaning in the Inheritance of "Yingge" [J]. Journal of Xinghai Conservatory of Music, 2021, (01): 176-184.
7. Liu Jianwen. Discussion on "Yingge Dance Originates from Nuo Dance" [J]. Journal of Guangzhou University (Social Science Edition), 2024, 23(03): 145-155.
8. Liu Jianwen. A Comparative Morphological Study of Yingge Dance and Huagu Dance [J]. Journal of Hanshan Normal University, 2013, 34(05): 56-60.