

# A Study of Anhui College Students' Preference for the Inheritance of Huangmei Opera based on Contingency Analysis and Decision Tree Model

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**Abstract:** In recent years, with the vigorous support of the national policy, the task of cultural inheritance has been carried out on the shoulders of the younger generation. Contemporary college students have the responsibility and obligation to actively learn and inherit the excellent traditional Chinese culture. Huangmei Opera, as one of the five traditional Chinese operas, was listed as the national intangible cultural heritage in 2006. It is an important part of Chinese culture. Its inheritance and development need to be studied urgently. Based on the current situation of Undergraduates' knowledge of Huangmei Opera in Anhui Province and the relevant data of their inheritance intention, this paper uses contingency analysis and decision tree algorithm to study the preferred forms of Undergraduates' inheritance of Huangmei Opera in Anhui Province, and provides reference for the inheritance and development of Huangmei Opera.

**Keywords:** Huangmei opera; Inheritance form; Contingency table analysis; Decision tree algorithms

## 1. Introduction

Huangmei Opera, as one of the five traditional Chinese operas, has the aesthetic value of opera and is worthy of further study and research. In 2015, the General Office of the State Council issued "Several Policies on Supporting the Inheritance and Development of Traditional Chinese Opera". Huangmei Opera has become the focus of protection and development of the central government and local governments. Colleges and universities are important bases for cultural inheritance and innovation. As practitioners and innovators of cultural inheritance, college students have the responsibility and obligation to actively learn and inherit Huangmei Opera, an excellent opera culture. Because of the advantages of region and resources, college students in Anhui Province have a direct impact on the development and inheritance of Huangmei Opera culture by recognizing and inheriting the traditional culture of Huangmei Opera. In the cultural inheritance, improving the inheritance enthusiasm of college students is the key to the development of traditional culture. Taking Huangmei Opera as an example, the reason why college students are unwilling to inherit Huangmei Opera is not only because they do not understand Huangmei Opera, but also because the current mainstream culture is too new and the inheritance form of traditional culture is not novel enough. Therefore, excavating the new forms of Huangmei Opera development

can provide new ideas for the development of Huangmei Opera, open up the new trend of the development of Huangmei Opera, and then attract contemporary college students to participate in the inheritance of Huangmei Opera culture.

## 2. Literature Review

In exploring the inheritance of Huangmei Opera, we must first pay attention to the development of Huangmei Opera and the status quo of the way of inheritance. The art of Huangmei Opera is a single form of inheritance, mostly for face-to-face teaching. Due to the limited energy of teachers, the limitations of such training methods are not conducive to the inheritance of Huangmei Opera. Qin Zhenzhen [1] (2018) proposed that Huangmei Opera was gradually overwhelmed by the information flow in the Internet era due to the lack of innovative brand design and integrated digital media fusion mechanism. Zhao Wei [2] (2018) pointed out that the existing development problems of Huangmei Opera mainly include the following points: failure to keep up with the trend has caused the audience to break, the development mode is not innovative, and talents are lacking. The two scholars gave relevant suggestions from the Internet communication form and the repertoire of Huangmei Opera. However, it is still necessary to explore in depth how to pass on and promote this traditional culture.

On the issue of the most direct stage performance continuation, Guan Yang [3] (2014) proposed that the inheritance and development of Huangmei Opera needs to strengthen the construction of talent team. While training the performance talents, it focuses on cultivating talents in scriptwriting, director, and beauty. Form a first-class talent group. Regarding the cultivation of talents, Wang Ping [4] (2011) advocates the art education of Huangmei Opera as the object of exploration, innovation and implementation, combines the “characteristic school” with the regional culture, and combines the cultivation of talents with the construction of disciplines. The combination of revitalization; Wang Qinglun [5] (2017) gave suggestions in the establishment of the Huangmei Opera course: it is required to cultivate the basic theoretical skills of performing arts in Huangmei Opera, and cultivate the talented cultural and artistic talents who are fully qualified in the popularization and promotion of Huangmei Opera.

After combing the literature, the following conclusions are drawn: Most scholars believe that Huangmei Opera is an excellent traditional culture, but the inheritance of Huangmei Opera needs to be updated. In addition, it is found that Huangmei Opera conducts research on communication in the college students group. Therefore, based on the results of the investigation and analysis of the college students' awareness of Huangmei Opera and their willingness to inherit, the paper analyzes the preference of Anhui college students for the inheritance of Huangmei Opera through scientific analysis.

### 3. Research and Analysis

#### 3.1. Research foundation

##### 3.1.1. Data sources

The data comes from the survey data of the Ninth National University Student Market Research and Analysis Competition. In order to obtain valid data, a simple random sample of 718 people was used to extract a simple random sample of 718 people, and relevant questionnaires were issued. The questionnaire has high reliability and validity, and the data source is authentic and reliable.

##### 3.1.2. Analysis result

First, based on the analysis of cognitive status. According to the method of cluster analysis, the cognitive status of college students in Anhui Province is divided into four categories of different cognitive levels;

Secondly, based on the gray correlation analysis results. The gray correlation analysis method is used to obtain the

correlation between the influencing factors and the willingness to inherit. The results show that interest motivation, cognitive status, educational influence and media factors are important factors influencing the college students' willingness to inherit Huangmei opera.

Finally, the results of the quantitative score based on the will of inheritance. Involving 16 evaluation variables, using the basic principles of IBM-SPSS statistical software and principal component factor analysis method to statistically analyze the evaluation variables, and find out five effects through the eigenvectors, eigenvalues and cumulative contribution rates of the sampled data. Inheriting the principal component factor of willingness, and on this basis, quantitatively evaluating the willingness of college students to pass on, and the scores are roughly distributed in the range of 0-500. The quantitative score of the will of inheritance provides the basis for the study of the form of inheritance.

#### 3.2. Research ideas

Based on the data results, the cognitive status, inheritance willingness, interest factors and media factors are taken as the factors influencing the students' preference for the inheritance of Huangmei opera. The analysis of the Internet communication and artistic innovation of Huangmei Opera is carried out, and the new inheritance form of Huangmei Opera is obtained. Secondly, it analyzes how different types of college students will have an opinion on the Internet communication of Huangmei Opera, thus realizing the precise positioning of college students' preference form of Huangmei Opera.

#### 3.3. Research methods and conclusions

##### 3.3.1. Analysis of the inheritance form of huangmei opera based on descriptive statistics

Principal component analysis method was used to calculate the comprehensive scores of 718 college students' willingness to inherit Huangmei opera, and four kinds of college students with different inheritance intentions were obtained: Class A is the one with higher inheritance willingness (300 points or more), and Class B is the one with higher inheritance willingness ( 300-200 points), category C is the general willingness to pass (200-100), and class D is the one with lower willingness to pass (below 100).

##### 3.3.1.1. Inclusive analysis of the willingness to inherit & the form of Internet inheritance

Table 1. Inheritance willingness & internet heritage form cross-tabulation

Category		Internet heritage form					Total
Willingness to inherit		I	II	III	IV	V	
	A	Count	49	53	57	49	7

	B	% of A	22.79%	24.65%	26.51%	22.79%	3.26%	100%	
		Count	228	258	205	207	55	953	
	C	% of B	23.92%	27.07%	21.51%	21.72%	5.77%	100%	
		Count	122	131	97	97	35	482	
	D	% of C	25.31%	27.18%	20.12%	20.12%	7.26%	100%	
		Count	15	16	27	22	20	100	
			% of D	15.00%	16.00%	27.00%	22.00%	20.00%	100%

- I: Establish a network education platform for Huangmei Opera;
- II: Establish a cultural public number for Huangmei Opera;
- III: Develop an app related to Huangmei Opera;
- IV: Design a game related to Huangmei Opera;
- V: Crowdfunding performance

It can be seen from Table 1 that 22.79% of the college students with the highest willingness to inherit Class A tend to establish the Internet heritage platform of Huangmei Opera Network Education Platform, and 24.65% of college students prefer to establish the cultural publicity form of Huangmei Opera. College students have a higher willingness to inherit, and the total propor-

tion of online education platforms that choose to establish Huangmei Opera is 23.92%. The willingness of C-class college students is general. Among them, 20.12% of the Internet-based forms of design related games are selected, and crowdfunding performances are selected. The total ratio is only 7.26%; the D-class college students have a lower willingness to inherit, and the proportion of crowdfunding performances is 20.00%. The preference of D-class college students for five kinds of Internet inheritance forms is not much different.

**3.3.1.2. Inclusive analysis of the willingness to inherit & the form of artistic innovation**

**Table 2. Inheritance willingness & artistic innovation form crosstabulation**

Category		Willingness to inherit							
		A		B		C		D	
		Count	% of A	Count	% of B	Count	% of C	Count	% of D
Artistic innovation	3D animation	53	19.56%	95	8.76%	51	9.01%	25	13.81%
	Drama	38	14.02%	189	17.42%	95	16.78%	11	6.08%
	Pop music	37	13.65%	161	14.84%	78	13.78%	31	17.13%
	Crosstalk	30	11.07%	120	11.06%	59	10.42%	47	25.97%
	Variety show	39	14.39%	162	14.93%	85	15.02%	37	20.44%
	Musical	26	9.59%	170	15.67%	79	13.96%	8	4.42%
	The film	48	17.71%	188	17.33%	119	21.02%	22	12.15%
	Total	271	100%	1085	100%	566	100%	181	100%

It can be seen from Table 2 that Class A college students have the highest willingness to inherit, among which 9.59% want to combine the innovation of Huangmei Opera and musical drama, and tend to have the most proportion of Huangmei Opera and film and 3D animation combined with innovation development; Gao, tends to have the largest proportion of Huangmei opera and drama and film development, accounting for 17.42% and 17.71% respectively; C-class college students have a general willingness to accept, and can better accept the combination of Huangmei opera and drama, modern variety show and film to form a new development trend. Class D college students have a lower willingness to inherit Huangmei Opera. In order to improve the inheritance willingness of Class D college students, it is best to combine Huangmei Opera with pop music, cross talk and comic dialogue.

In summary, college students with different willingness to inherit will choose to diversify when they choose Huangmei Opera to combine with other art forms, and integrate Huangmei Opera with other art forms in light of the actual situation.

**3.3.2. Research on the preference of internet heritage form of huangmei opera based on decision tree model**

The answer to the questionnaire question of Huangmei Opera's Internet communication form is converted into numerical data for analysis, and then the Huangmei Opera Culture Communication No. is established in the answer of Huangmei Opera Internet Communication Form, the establishment of Huangmei Opera Network Education Platform, and the design of Huangmei Opera related games. As an output variable, Python is used to construct a decision tree model for classification. We get the results shown in Figure 1.

As can be seen from Figure 1:

In the cognitive status quo, the score is higher than the average level of the college students, and the scores of interest motivation, educational influence and media factors are lower than the average level of the college students, which will favor the establishment of the Huangmei opera culture public number; in terms of educational influence and media factors The score is higher than the average level of the college students, and the scores in the cognitive status and interest motives are lower than the average level of the college students. This is the form of preference for the game. The scores of in-

terest motivation and educational influence are higher than the average level of the college students. However, in the cognitive status quo and media factors, the score is

lower than the average level of the college students, which will favor the establishment of a network education platform.

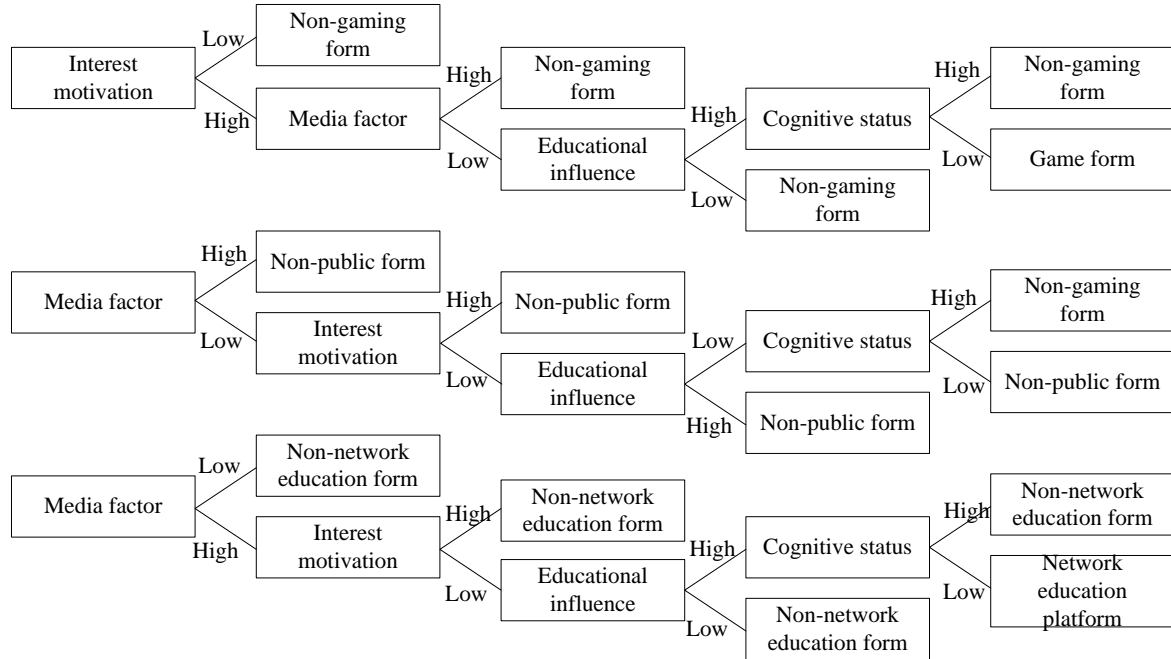


Figure 1. Analysis of the internet communication form of Huangmei opera

#### 4. Suggest

Based on the analysis of the willingness of inheritance and the form of inheritance and the results of the decision tree algorithm, the following suggestions are proposed for the inheritance form of Huangmei Opera.

##### 4.1. Government aspect

Make overall plans and make new ones. Encourage the education department to strengthen the education of Huangmei Opera in the school, provide opportunities for the students to learn and inherit the culture of Huangmei Opera; understand the current development dilemma of Huangmei Opera, provide financial support for the inheritance and development of Huangmei Opera, and make Huangmei Opera have the ability and conditions to carry out innovative development.

##### 4.2. College aspect

Give play to the role of classroom teaching and create a campus culture atmosphere. Colleges and universities in Anhui Province should promote the inheritance of Huangmei opera culture. Colleges and universities should start the curriculum reform, and incorporate the education of Huangmei Opera as a regional intangible cultural heritage into the school teaching plan, not only for performance, but also for opera culture and aesthetic value. The theoretical course provides students with an

opportunity to gain an in-depth understanding of Huangmei Opera. It can also organize extracurricular activities related to Huangmei Opera to enable college students to integrate into the traditional culture of Huangmei Opera, thereby enhancing students' interest in Huangmei Opera and improving the inheritance of college students to Huangmei Opera. Promote the promotion and development of Huangmei Opera.

##### 4.3. Personal aspect

College students should establish a culturally confident attitude, understand and learn the culture of Huangmei Opera, and shoulder the heavy responsibility of cultural inheritance. For example, you can actively learn courses related to traditional culture such as Huangmei Opera, participate in extracurricular practice activities related to Huangmei Opera, and cultivate interest in Huangmei Opera to enhance the willingness to inherit.

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