

Research Article

Research on the Evaluation and Optimization Method of the Impact of Chorus Education on University Culture Based on Coevolution Model in the Background of Artificial Intelligence

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The development of artificial intelligence technology is a field where all walks of life need to carry out in-depth research in the future, and the introduction of artificial intelligence technology in the field of university evaluation has become an inevitable trend. Through the collection and collation of the literature at home and abroad, the influence of chorus education on college culture in China has long remained in qualitative and experiential judgment and the significance and value of chorus education to colleges and universities are relatively single. Therefore, it is of great innovative value and practical significance to establish a scientific, systematic, and comprehensive evaluation mechanism for the impact of chorus education on university culture and to scientifically analyze key issues, establish evaluation criteria, and inject new research perspectives into the promotion of chorus education in colleges and universities in China, combining with the mature coevolution theoretical model of management science. It is of great innovative value and significance to combine the DEMATEL research method with the current practice of promoting chorus education in China's colleges and universities and to systematically and comprehensively construct the evaluation system and research paradigm in line with chorus education by using the qualitative and quantitative methods.

1. Introduction

Hegel, a famous philosopher, once said that imagination is the most outstanding skill in artistic creation. Einstein, a scientist, also pointed out in his treatise *On Science* that imagination is more important than knowledge, because knowledge is limited, while imagination summarizes everything in the world, promotes progress, and is the source of knowledge evolution [1]. Because of the sensibility of the evaluation method, it is often criticized by the academic circles, and the research on the subjective conjecture and experience summary of the cultivation of college students' personality, moral accomplishment, innovation ability, and imagination ability is seldom confirmed by authority. Therefore, the quantitative research on the impact of chorus education in colleges and universities is an important theoretical and practical innovation of chorus education

research in colleges and universities and has important practical significance and value for enhancing the scientificity, systematicness, and integrity of the impact evaluation of chorus education in colleges and universities. Based on the coevolution theory of management, this paper constructs a comprehensive and systematic impact evaluation system for chorus education in colleges and universities. By combining qualitative and quantitative research methods, it objectively, systematically, and comprehensively demonstrates the overall situation of the development of chorus education in different colleges and universities and provides scientific suggestions and opinions for the development of chorus education in different types of colleges and universities in a holistic way. Because of the sensibility of the evaluation method, it is often criticized by the academic circles, and the research on the subjective conjecture and experience summary of the cultivation of college students'

personality, moral accomplishment, innovation ability, and imagination ability is seldom confirmed by authority. Therefore, the quantitative research on the impact of chorus education in colleges and universities is an important theoretical and practical innovation of chorus education research in colleges and universities and has important practical significance and value for enhancing the scientificity, systematicness, and integrity of the impact evaluation of chorus education in colleges and universities. Based on the coevolution theory of management, this paper constructs a comprehensive and systematic impact evaluation system for chorus education in colleges and universities. By combining qualitative and quantitative research methods, it objectively, systematically, and comprehensively demonstrates the overall situation of the development of chorus education in different colleges and universities and provides scientific suggestions and opinions for the development of chorus education in different types of colleges and universities in a holistic way. Because of the sensibility of the evaluation method, it is often criticized by the academic circles, and the research on the subjective conjecture and experience summary of the cultivation of college students' personality, moral accomplishment, innovation ability, and imagination ability is seldom confirmed by authority. Therefore, the quantitative research on the impact of chorus education in colleges and universities is an important theoretical and practical innovation of chorus education research in colleges and universities and has important practical significance and value for enhancing the scientificity, systematicness, and integrity of the impact evaluation of chorus education in colleges and universities. Based on the coevolution theory of management, this paper constructs a comprehensive and systematic impact evaluation system for chorus education in colleges and universities. By combining qualitative and quantitative research methods, it objectively, systematically, and comprehensively demonstrates the overall situation of the development of chorus education in different colleges and universities and provides scientific suggestions and opinions for the development of chorus education in different types of colleges and universities in a holistic way.

2. Research Status of Chorus Education and College Culture at Home and Abroad

The research on chorus education and university culture has been carried out for many years at home and abroad. From the collation and research of various literature materials at present, we can see that the depth and breadth of the research are relatively comprehensive. There are many studies on chorus education in China in the fields of chorus creation, chorus history, chorus culture, chorus value and significance, chorus education methods and means, chorus development and management, and so on. In the study of the history of chorus, Chang has made a more in-depth discussion on the development of Chinese and Western chorus art, pointing out that both Chinese and Western chorus have gradually developed from monophonic to polyphonic and that Western chorus is mainly religious

music, while Chinese chorus is mainly the source of "human" labor, life, and entertainment needs [2]. From the perspective of ancient Chinese music aesthetics, Pan made a more in-depth discussion on the origin and development of ancient Chinese chorus art and put forward that "the mainstream of ancient Chinese chorus is the thought of rites and music, pursuing the aesthetic thought of harmony between man and nature." In the second century BC, a monograph "On Music" in the early Western Han Dynasty pushed China's musical aesthetics to its peak [3]. Shao examined the origin of Western chorus from the perspective of Western music history and concluded that "the trinity of music, dance, and poetry is related to the participation of religious sacrificial groups, while the original performance of tragedy is mainly chorus [4]." From the perspective of the value and significance of chorus, Huang [5] proposed that chorus has important value and significance for stimulating the spirit of teamwork, collectivism and patriotism from the perspective of chorus creation, chorus lyrics, chorus culture, chorus context and chorus aesthetics. Li [6] put forward the role of chorus curriculum education in stimulating students' imagination, singing ability and innovation ability in the aspects of chorus foundation, culture, ideology and morality, national spirit, and command skills. Huaxia [7] and Sun [8] put forward the value and significance of chorus as a collective art form in students' aesthetic and moral education, discussed the role of chorus art and education, and put forward the role of chorus curriculum education in cultivating students' EQ. It also puts forward the process and ways of chorus education for the development of human personality. The research on chorus education from the perspective of professional development is an important aspect of chorus education and campus culture research. From the perspective of the development of modern campus music, Pan [9] explores how chorus can better realize the integration and promotion of aesthetic education and singing skills, innovation, and aesthetic ability, as a driving force for the development of chorus on campus. Guo [10] carried out research on chorus education from the perspective of non-art comprehensive universities and put forward suggestions and opinions for development. Liu [11] carried out higher education research on Liszt and Hungarian chorus education and explored the future development path of professional chorus education in China through the research on the development of chorus education in professional colleges and universities at home and abroad. Hu [12] starts from the educational significance of chorus education, understands the "human" bred in the development of chorus, and integrates its life attribute value. Zhang [13], Xu [14], Jin [15], and Wang [16] focus on the construction and management of chorus education in colleges and universities from different perspectives and put forward the corresponding campus cultural value and significance, so as to construct the management mode and brand value of chorus education in colleges and universities from the macro- and microperspectives. The above research paradigm has strong theoretical research value and practical significance for the current development of chorus education in China and has important guiding significance for

promoting the development of chorus education in China and chorus education in colleges and universities.

There are many research paradigms and research methods in the world to carry out chorus education and chorus art research, which have formed a wealth of literature. The research perspective is different from the domestic research. In the research, we should combine film art, social life, psychotherapy, and other fields to study, while the relevant literature of pure theory, technology, practice, and management is not the focus of the research [17]. Through the analysis of the impact of film on commercial behavior and social consciousness, it mainly takes the film chorus as an example to analyze the value and significance of innovation, creation, and imagination by analyzing the relevant content of social consciousness in chorus films [18]. This paper analyzes the current situation of chorus education in primary and secondary schools, explores the optimal operation mechanism of chorus education, and scientifically plans and designs the future development of chorus education [19]. Combining chorus with dance art and exploring educational value in social interaction, the research content has practical value and significance [20]. The training methods of perceiving the world, experiencing life, and creative thinking in the training of a cappella in primary and secondary schools are applied to the educational concept of life, and in the process of practice and application, the combination of a cappella and social life is explored. In terms of literature research on the combination of chorus education, music education research, psychology, and medical research, the international community is very rich, in which a large number of qualitative and quantitative comprehensive studies are carried out by means of investigation, experiment, and questionnaire (Ahn et al. [21] and Jacob [22]). Through the experimental study of the volume of music and people's aesthetic point of view, the acceptance limit of music art is measured (Nilesh [23]). The students are put in music environment and the music content and memory they can bear in a day is measured through the method of experimental verification (García González et al. [24]), that is, through experiments and comparative studies, to determine the effects of prenatal music stimulation on fetal heart condition, neonatal physical measurement, and vital signs of pregnant women and to scientifically analyze the effects of music on human beings (Crickmore [25]). It is an effective measurement and research on the cultivation effect of music and chorus art on people's aesthetic taste and draws corresponding research conclusions (Tai et al. [26]). By using the method of questionnaire, this paper studies the effect of music education of parents and children in Hong Kong and draws the conclusion that parents are the important factors that effectively influence the value of children's music consciousness (Duarte et al. [27]). That is to say, through the questionnaire survey and measurement of the impact of music festival activities on the image of tourist destinations, the analysis proves that there is a positive correlation between them (Music [28]). It proves that chorus and music education are closely related to therapy and health, aesthetic concepts, life measurement, and new media (Barrientos-Fernández et al. [29]). By means of follow-up

investigation, questionnaire, and experiment, the comprehensive ability, different types of intelligence (general intelligence, linguistic and nonlinguistic intelligence, and multiple intelligence), academic performance, and learning habits of students are effectively measured, which proves the relevance of music education (Shin and George [30] and Wesolowski [31]). Rasch measurement model is used to make a comprehensive qualitative and quantitative evaluation of music performance evaluation and music performance evaluation and to explore the attempt of scientific evaluation of music art (Das et al. [32]). From the analysis of scientific research, the influence of music on human brain, and the influence value of the change of music content on people's attention and concentration ability, the above qualitative and quantitative research combined with psychology and medicine is an exploration of the scientific research of music and chorus art education, which fully illustrates the influence of music and chorus art on people's cognition, imagination, innovation, aesthetics, morality, intelligence, and learning. This influence is invisible, but through scientific research, we can find its corresponding law of value. This is the research frontier of chorus education, art education, and music education in the future.

In recent years, domestic researchers have made great progress in theoretical exploration and practical research by combining qualitative and quantitative methods, but due to the difficulty of research and the interdisciplinary research background required by the research, there are still some limitations in the current talent cultivation in China. Therefore, at present, it is difficult to find the research materials that really combine qualitative and quantitative analysis by searching the literature. For the research in the field of chorus education, the most difficult thing is to evaluate the level of its educational development. The scientificity, comprehensiveness, subjectivity, and objectivity of the evaluation will directly affect the identification of the development of chorus education. It is of great research value and significance to scientifically and rationally formulate the development strategy of chorus education and to study the key factors affecting the development of chorus education. Pei put forward that "measurement and evaluation is the axis of the operation of art education [33]"; Zhu put forward the following: "To construct an objective evaluation system of chorus education in colleges and universities can not only measure and evaluate students' artistic level, but also guide and standardize students' chorus training [34]." The above scholars have also put forward many research ideas on the evaluation system and methods of chorus education. Zhou and Xu put forward that "evaluation" is to measure the value of people or things [35]. The scientificity and systematization of "evaluation" are one of the basic contents to complete the qualitative and quantitative research of chorus education. Therefore, it is of great research value and significance for the development of different types of colleges and universities to carry out scientific research on the impact of chorus education on college culture, scientifically analyze its development, establish a professional system for the

development of chorus education in colleges and universities, and comprehensively analyze the internal and external complex factors affecting its development.

3. Analysis of Influencing Factors Based on Coevolution Theory

Coevolution [36] theory was first put forward by biologists Paul Erich and Peter Raven in 1964 in their paper entitled "Butterflies and Plants: A Study in Coevolution (Jazen [37], Norgaard [38], Eisenhardt [39], and Hodgson [40]). With the development of scholars, at the beginning of the twenty-first century, the theoretical system of coevolution has been basically established, and fruitful research results have been achieved in nonbiological fields, such as social economy, organization, management, and computer modeling [41]. It regards the evaluation and occurrence process of things as a complete whole, fully considers the relationship between various factors and elements that constitute the development process of things, and affirms their interaction in the development and change, which is of great value for analyzing the complex and changeable social environment and the laws that cannot be inferred by mathematics. It has a strong practical significance for the study of the development law of current organizational management, enterprise management, and other fields, for the analysis and study of the key factors and elements affecting the development of organizations and enterprises, and for the study of development law. The introduction of coevolution theory into the study of the influence of chorus education on university culture has important innovative value and significance for objectively judging the influencing factors and influencing factors of university chorus education and exploring the key influencing dimensions.

Based on systematic and holistic research, this paper constructs a model of the impact of chorus education on university culture, analyzes the corresponding development characteristics of different types of chorus education in universities, and explores its different development paths (see Figure 1). On the basis of respecting the relationship between each element and each factor, we must also consider the synergistic correlation between each element and each factor. The traditional research on the influence of chorus education on university culture only pays attention to the in-depth study of one aspect, while ignoring the influence of other factors. The theory of synergistic evolution is based on the research dimension of inside and outside, people and things. It fully affirms the correlation between the factors and breaks through the traditional thinking mode of one-way causality, so the model construction of this study has great exploratory and innovative value for the systematic and scientific research of chorus education. Based on systematic and holistic research, this paper constructs a model of the impact of chorus education on university culture, analyzes the corresponding development characteristics of different types of chorus education in universities, and explores its different development paths (see Figure 1). On the basis of respecting the relationship between each element and each factor, we must also consider the synergistic correlation

between each element and each factor. The traditional research on the influence of chorus education on university culture only pays attention to the in-depth study of one aspect, while ignoring the influence of other factors. The theory of synergistic evolution is based on the research dimension of inside and outside, people and things. It fully affirms the correlation between various factors and breaks through the traditional thinking mode of one-way causality, so the model construction of this study has great exploratory and innovative value for the systematic and scientific research of chorus education. Based on the theory of coevolution, this paper constructs a set of influencing factors of chorus education on university culture. The influence of chorus education on university culture will not be a single form, but more an integrated display. Each factor has a close relationship and does not exist independently, so it should be carried out in a multi-level and multidimensional way of coevolution. The factors are more determined from the actual research and interviews, and at the same time, there are corresponding expert suggestions. This paper systematically studies the influence system of university culture from the two dimensions of people and things, external and internal, and establishes four quasi-lateral influence elements and sixteen element-level influence factors. It analyzes the mutual influence relationship from the four quasi-lateral elements of campus demand, campus organization, campus environment, and cultural products and comprehensively influences the change of campus demand from the needs of classmates, teachers, courses, and society. This paper analyzes the internal relevance of the external influence factors from the perspective of "people," analyzes the internal relevance of the internal influence factors from the perspective of "people" from the relationship between the school level, college level, community, and mass organizations, comprehensively affects the construction of campus organizations, and comprehensively studies the influence relevance affecting the construction of campus environment from the dormitory, classroom, activity, and social influence. From the construction of campus brand of courses, celebrities, works, and activities, the influence system of campus chorus education development of cultural products is constructed.

4. Empirical Analysis of Cases

From the model of the influence of chorus education on university culture constructed by the theory of coevolution, we can see the correlation between its elements and factors, but for the value and significance of its influence, there is a lack of intuitive reflection, which requires scientific calculus and valuation and the combination of subjective judgment and objective comprehensive analysis. After quantifying the judgment information of various influencing factors collected from various sources, we can comprehensively show the influence of chorus education on culture in colleges and universities, so as to better reflect the value and significance of its research. In this paper, through a comprehensive university of science and technology in southwest China, the school has not set up a music major, chorus education is

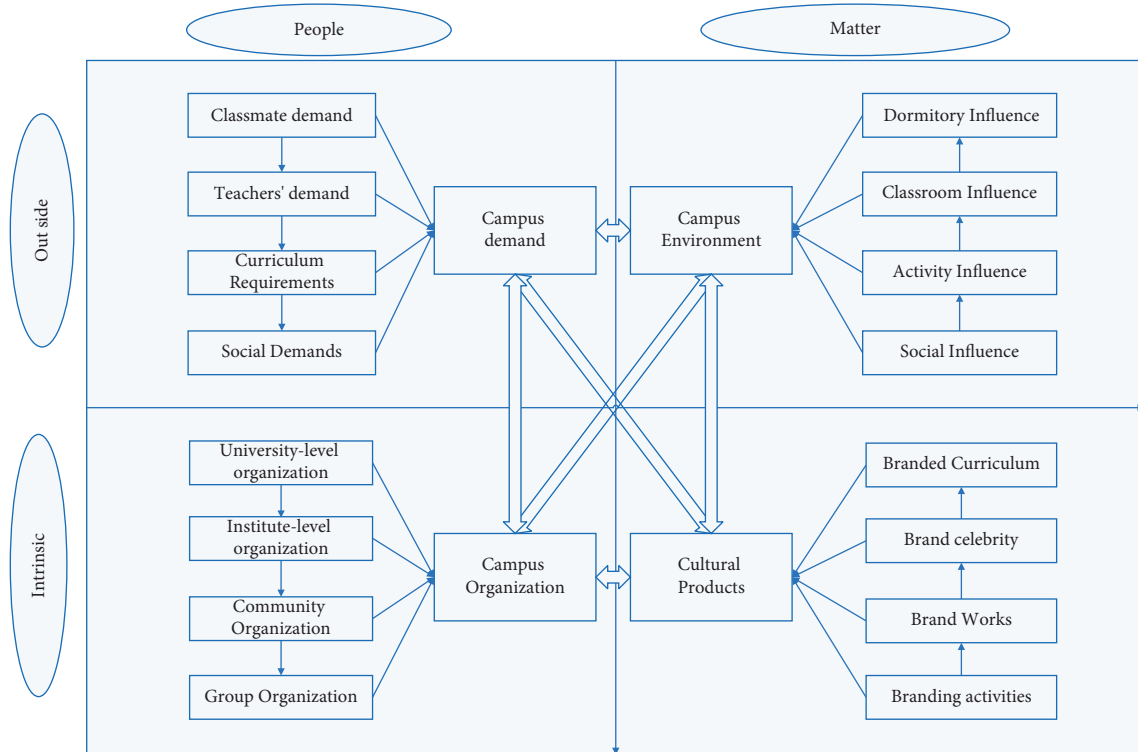


FIGURE 1: Model of the impact of chorus education on college culture.

mainly displayed in the form of courses and the establishment of university choirs, through the investigation of teachers and managers who participated in the management of choirs, as well as the investigation of some students who chose to study chorus courses, and a total of 20 samples were collected and interviewed: among them, one chorus conductor, two teachers from relevant management departments, five chorus cadres, two chorus members, five students who have taken chorus courses, and five students who have not taken chorus courses. In-depth interviews and questionnaires are combined to carry out relevant empirical research. The basis for selecting the relevant samples is mainly the management and participants of the chorus, mainly composed of instructors and relevant managers. In addition, the students who minor in related courses and those who do not minor in related courses make a certain differential choice, which is more objective to show the value of the study.

The method of DEMATEL (Decision Making Trial and Evaluation Laboratory) is used, which uses graph theory and matrix tools to objectively analyze the elements and factors and uses expert scoring method. Determine the logical relationship between the relevant elements in each dimension and construct the impact matrix, calculate the impact between each element and its impact, as well as the impact between other elements through the relevant formula, and finally form the impact analysis method of evaluation purpose [42]. DEMATEL comprehensive evaluation method attaches importance to the experience and knowledge of relevant experts and integrates the comprehensive judgment of experts and scholars on complex problems. “DEMATEL is a more

effective evaluation method, especially for those systems with uncertain element relationships [43].” This method better integrates qualitative and quantitative research, is very suitable for the objective reality of this study, has certain adaptability for the analysis of the impact of chorus education on college culture, can objectively integrate the comprehensive opinions of experts, scholars, and students from different angles, and can effectively overcome the problem of inconsistent subjective opinions and judge the development of chorus education in colleges and universities. It provides a better research path and method to solve this problem and is more objective and close to the actual situation of chorus education in the development of colleges and universities.

4.1. Comprehensive Analysis and Construction of the Index System. Through the relevant influencing factors and elements in the model of the impact of chorus education on university culture constructed by the theory of coevolution, the analysis index system should be established, and the four elements of campus demand, campus organization, campus environment, and cultural products should be constructed as the criterion layers U1–U4 of the index system. Students’ needs A1, teachers’ needs A2, curriculum needs A3, social needs A4, school-level organizations A5, college-level organizations A6, community organizations A7, group organizations A8, dormitory influence A9, classroom influence A10, activity influence A11, social influence A12, brand courses A13, brand celebrities A14, brand works A15, brand activity A16 are taken as the element layer of the index system, and the evaluation and analysis system of the impact

of chorus education on university culture is taken as the target layer, through the construction of a complete evaluation index system with three main levels of target layer, criterion layer, and element layer as shown in Table 1.

4.2. Basic Assumption and Operation Steps of Modeling.

The first step is to design an evaluation interview questionnaire by combining the coevolution theory, the evaluation and analysis index system, and the DEMATEL research method and to establish a five-level evaluation system with five levels of 0, 1, 2, 3, and 4 as the strong and weak correlation, where 0 means no influence, 1 means slight influence, 2 means small influence, 3 means medium influence, and 4 means large influence. 20 people were interviewed, and the overall effectiveness of the survey was 100%.

The second step is to construct the direct impact matrix of element level and criterion level by collecting the comprehensive impact data obtained from interviews. Finally, X^d is obtained as shown in the following:

$$X^d = \begin{bmatrix} 0 & A_{1,2} & \cdots & A_{1,j} \\ A_{2,1} & 0 & \cdots & A_{2,j} \\ \vdots & \vdots & \vdots & \vdots \\ A_{i,1} & A_{i,2} & \cdots & A_{i,j} \end{bmatrix}. \quad (1)$$

Among $1 \leq i \leq n, 1 \leq j \leq n, n$ is the total number of impact elements.

Step 3 is to calculate the normalized impact matrix. Through the direct impact matrix X^d , the sum of the elements in each row is calculated and the maximum value is taken. The sum of the elements in each row is calculated and the maximum value is taken; the maximum values in the row and column are compared to obtain the maximum values in the row and column, and in the impact matrix X^d of the comprehensive evaluation and analysis index system, each element is divided by the maximum value to obtain the standardized direct impact matrix X .

Step 4 is to calculate the comprehensive impact matrix T . According to the formula, the comprehensive influence matrix T is obtained from the direct influence matrix X . T_{ij} represents the degree of direct and indirect influence of element i on element j or element J .

The extent of the combined effect from element i is shown in the following:

$$T = X(1 - X)^{-1} = (t_{ij}). \quad (2)$$

Step 5 is to calculate the influence degree (R), the influenced degree (D), the centrality ($R + D$), and the cause degree ($R - D$) in the comprehensive influence matrix. Centrality ($R + D$) is the direct manifestation of the influence of the four factors. Cause degree > 0 indicates that the element has a great influence on other elements, which is called cause element. The result element refers to the element whose cause degree is less than 0, which indicates that the element is greatly influenced by other elements and is called the result element as shown in the following:

$$R = \sum_{j=1}^n T_{ij} (1 \leq i \leq n, 1 \leq j \leq n), \quad (3)$$

$$D = \sum_{j=1}^n T_{ij} (1 \leq i \leq n, 1 \leq j \leq n). \quad (4)$$

The sixth step is to establish the weight ratio of the influence of chorus education on university culture. Because the centrality is used to calculate the comprehensive influence value of each criterion layer element on the whole, the comprehensive proportion is displayed comprehensively through the numerical value. "Therefore, the weight of the first-level index can be obtained by normalizing the centrality of each index [44, 45]." The comprehensive impact matrix index weight vector formula is shown in the following:

$$A = \left(a_n \mid \sum_{n=1}^4 a_n = 1, 0 \leq a_n \leq 1, n = 1, \dots, 4 \right). \quad (5)$$

In the previous equation, a_n is the weight of the indicator, U_n .

4.3. Analysis of the Empirical Results of a University in Southwest China. Through the above calculation steps and the collected questionnaire evaluation ratings of relevant experts, scholars, students, and cadres, we assign them to the direct matrix of DEMATEL research method and finally calculate the comprehensive impact matrix T of chorus education on university culture in a southwest university, as shown in Table 2.

By calculating the influence degree, affected degree, centrality, and cause degree in the comprehensive influence matrix, the comprehensive influence relationship table of chorus education on university culture in a southwest university is formed, as shown in Table 3.

Through normalization processing, the weight vector of each criterion layer is finally obtained by integrating the relevant influencing factors of each element layer, as shown in Table 4.

4.3.1. Analysis of Empirical Results at the Element Level.

Through the calculation of the relevant data of a university in southwest China, the above analysis results are finally calculated, so that the comprehensive evaluation results of the impact of chorus education on campus culture in a university in southwest China can be clearly judged, and the factors and results affecting chorus education in this university can be analyzed. Among the campus needs, social needs and students' needs are the main factors to promote the development of chorus education, and school-level organizations and mass organizations are the main driving forces to construct the organizational system of chorus education in a university in southwest China. Through investigation, research, and analysis, school-level organizations are mainly composed of school-level league organizations and mass organizations, and the mass

TABLE 1: Evaluation and analysis index system of the impact of chorus education on university culture.

Target layer	Criterion layer	Feature layer
Evaluation of the influence of chorus education on college culture	Campus demand U1	Classmate demand A1
		Teacher needs A2
		Course requirements A3
		Social needs A4
	Campus organization U2	University-level organization A5
		Institute-level organization A6
		Community organization A7
		Group organization A8
	Campus environment U3	Dormitory influence A9
		Classroom influence A10
		Event impact A11
		Social influence A12
	Cultural products U4	Brand course A13
		Brand celebrity A14
		Brand work A15
		Brand campaign A16

TABLE 2: Comprehensive impact matrix of chorus education on university culture in a southwest university.

	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A13	A14	A15	A16
A1	0.32	0.71	0.76	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A2	0.34	0.34	0.58	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A3	0.45	0.56	0.46	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A4	0.71	0.87	0.93	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A5	0.00	0.00	0.00	0.00	0.12	0.44	0.40	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A6	0.00	0.00	0.00	0.00	0.24	0.14	0.31	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A7	0.00	0.00	0.00	0.00	0.13	0.15	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A8	0.00	0.00	0.00	0.00	0.16	0.27	0.36	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.45	0.36	0.20	0.00	0.00	0.00	0.00
A10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73	0.43	0.52	0.49	0.00	0.00	0.00	0.00
A11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.54	0.36	0.47	0.00	0.00	0.00	0.00
A12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.78	0.77	0.72	0.37	0.00	0.00	0.00	0.00
A13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.72	1.11	1.04	1.11
A14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.56	0.65	0.76
A15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.78	0.89	0.63	0.89
A16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.78	0.89	0.83	0.69

TABLE 3: Comprehensive impact of chorus education on university culture in a southwest university.

Factor	Degree of influence	Influenced degree	Centrality	Degree of cause	Factor attribute	
Classmate demand A1	A1	2.21	1.83	4.03	0.38	Causal factor
Teacher needs A2	A2	1.67	2.48	4.15	-0.81	Result factor
Course requirements A3	A3	1.97	2.73	4.69	-0.76	Result factor
Social needs A4	A4	2.95	1.75	4.69	1.20	Causal factor
University-level organization A5	A5	1.17	0.65	1.82	0.52	Result factor
Institute-level organization A6	A6	0.92	1.01	1.93	-0.08	Result factor
Community organization A7	A7	0.50	1.16	1.66	-0.66	Result factor
Group organization A8	A8	0.88	0.65	1.53	0.22	Causal factor
Dormitory influence A9	A9	1.30	2.44	3.73	-1.14	Result factor
Classroom influence A10	A10	2.18	2.20	4.37	-0.02	Result factor
Event impact A11	A11	2.01	1.95	3.96	0.06	Causal factor
Social influence A12	A12	2.64	1.54	4.17	1.10	Causal factor
Brand course A13	A13	3.98	2.89	6.87	1.09	Causal factor
Brand celebrity A14	A14	2.57	3.44	6.02	-0.87	Result factor
Brand work A15	A15	3.19	3.15	6.33	0.04	Causal factor
Brand campaign A16	A16	3.19	3.44	6.63	-0.26	Result factor

TABLE 4: Weight ratio of chorus education to campus culture in a university in southwest China.

Factor	Campus demand U1	Campus organization U2	Campus environment U3	Cultural products U4
Centrality	17.57	6.94	16.25	25.85
Normalization processing	26.37%	10.42%	24.39%	38.81%

organizations here are mainly formed by the spontaneous development of school students, which reflects that the spontaneous love of students for chorus art in this university is an important force to promote the development of chorus education. The influence of activities inside and outside the school and the social influence are the causes of the influence of chorus education on the campus cultural environment of a university in southwest China, among which the social influence is the decisive value and the most important thing to promote the construction of campus culture. The social influence factors of campus chorus education in colleges and universities are far more important than the influence of activities. Therefore, when the social influence declines, it will certainly affect the comprehensive investment of colleges and universities in chorus education and ultimately affect the improvement of the whole level of chorus education. Among the cultural products, brand courses and brand works are the reasons for the influence of chorus education in a university in southwest China on university culture, which reflects the importance of the construction of brand courses in chorus education in universities. Courses are an important manifestation of meeting the needs of students and society, and works are a key factor in shaping social influence. The most important factor in promoting chorus education in comprehensive colleges and universities is the construction and shaping of brand courses and works, which will bring comprehensive effects to demand, organization, and environment. From the empirical calculation, we can see that dormitory influence, brand celebrities, and teachers' needs account for a higher proportion of the result factors, which is different from the perceptual cognition obtained from the survey and interview. In the perceptual cognition of students and teachers, it is generally believed that the construction of dormitory culture and the cultivation of teachers' ability are the key factors affecting the development of chorus education in colleges and universities. However, through comprehensive analysis and calculation, combined with feedback from all sides, it is found that these are not important factors, and how to further stimulate the needs of students, meet the needs of society, expand social influence, and develop brand courses are the key factors to promote the long-term development of school chorus education.

4.3.2. Analysis of Empirical Results at the Criterion Level. By normalizing the empirical results of the criterion layer, it can be clearly found that in the study of the impact of chorus education on university culture in a university in southwest China, the demand for cultural products on campus culture construction accounts for the highest proportion, which fully reflects that universities have invested more energy in this

area. It can be found that the two elements of campus organization and campus environment account for a low proportion, of which the proportion of campus organization in colleges and universities is only 10.42%, reflecting the relative lack of organizational construction in the construction of chorus education in colleges and universities. After normalization, the relative mean of the four elements of the criterion layer can better reflect the balanced development trend of the school from the three levels of teachers, cadres, and students. From the overall analysis of the university, we can see that the unbalanced development of the school is more obvious, and the brand courses and works of the university are important factors affecting the overall development. Through research and empirical analysis, we can find that the university's cultural products play an important supporting role in meeting the needs of teachers, cadres, and students, which shows that the expectations of teachers and students for excellent courses and works are the key factors to promote the development of chorus education. Therefore, strengthening the construction of campus culture is the primary task of the construction of campus culture and improving the overall development level of the school, enhancing the overall competitiveness of the school, and promoting the overall development of the school. Therefore, from the study of the criterion level, it can be clearly seen that strengthening the development of organizational construction in school chorus education is the top priority of the current school chorus education and that schools need to enhance the influence of organizations at all levels on other elements and factors and improve the absorption and integration of school-level organizations and mass organizations, to provide a good development space and environment for the college and community organizations, to promote the comprehensive improvement of the influence of the result elements, and to strengthen the comprehensive coordination of the campus environment, campus cultural products, and other factors, so as to improve the overall influence of school chorus education in the construction of campus culture.

5. Conclusions and Recommendations

Through the in-depth study of this paper, we can see that it is wrong for many colleges and universities to rely more on the support of schools and the state when promoting chorus education in aesthetic education, without really facing the main group of students in education, and we need to change the original logic of campus chorus development, starting from the students' understanding and thinking of chorus. To find the development motivation from the cultivation of students' overall hobbies, we need to go deep into enterprises to understand the social needs and promote the development of campus chorus from the side incentive effect of the

ability cultivation of students with comprehensive quality. In addition, we should rely on chorus education to continuously enhance the marketing power of the whole society and thus establish brand courses, improve curriculum content, form and method innovation, constantly promote the development of the overall chorus education, and stimulate the evolution of campus aesthetic education chorus education. It constantly updates and evolves its development logic from different dimensions, different needs, and different development perspectives to promote the innovative development of chorus education.

Based on the theory of coevolution, using DEMATEL research method, and combining qualitative and quantitative methods, this paper constructs an evaluation model of the impact of chorus education on university culture and makes a quantitative and qualitative study of the current situation of chorus education in a comprehensive and non-music major construction university in southwest China. It summarizes the qualitative analysis of different experts, scholars, students, teachers, and administrators on the current development of chorus education in the university. By collecting the key differences of different perspectives, different viewpoints, different thinking, and different values, we can scientifically and systematically quantify the opinions of all parties and identify the key factors affecting the development of schools in the general cognition. By synthesizing the opinions of all parties, we can scientifically form a cognitive judgment acceptable to the public, comprehensively analyze the current situation of the development of university chorus, evaluate and quantify the advantages and disadvantages of the development of university chorus, locate the key issues of concern, and facilitate the objective integration of consensus among decision makers. Construction methods are put forward scientifically, and reasonable strategic development plans and objectives are formulated. This research method takes the construction of a comprehensive and systematic research paradigm as the main innovation point, aiming to provide a new research method for the scientific and systematic development of the impact of chorus education on university culture and to provide new research ideas and paths for the deepening research of aesthetic education, humanistic training, value shaping, and other aspects of education in colleges and universities [31].

Data Availability

Data sharing is not applicable to this article as no datasets were generated or analyzed during the current study.

Conflicts of Interest

The authors declare no conflicts of interest.

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