

A Comparative Study on the Teaching Model of Chorus Conduction in Chinese and Foreign Universities Based on Diversity Analysis under the Background of Information Technology

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Abstract: Chorus is an art that represents the level of national music and the popularity and development of music. It is also a pearl in the treasure house of human art. In the field of music art, chorus is one of the most accessible and understandable forms. At present, most colleges and universities in China have established choirs, which are the birthplace of choirs. Team building is also one of the important conditions for the development of chorus. The educational function of music is to purify the soul and cultivate people's temperament, emphasizing that music education has always been a good tradition in China. Chorus conductor plays an important role in China's music education and training. This paper analyzes and compares the Chinese and foreign choral conductor and the teaching mode in colleges and universities, discusses the situation of chorus and conductor teaching in foreign colleges and universities, and provides suggestions for the common features of Chinese and foreign chorus conductor teaching and the reform of chorus conductor teaching in Chinese colleges and universities. According to the experiment and investigation, the machine learning algorithm is introduced into the comparative construction of chorus conducting teaching mode research, and the construction of a new comparative research system can increase the satisfaction of 20%.

1. Introduction

Chorus art is the result of music development, with unique artistic expression and artistic attraction. Choral art originated from religious music in medieval Europe. Understanding the artistic characteristics of choral music and the artistic appeal of choral music and the development trend of modern music can help improve the feeling and performance of choral art.

The research on chorus conducting teaching is relatively rich, and Bland Micah proposed to optimize and improve the teaching method of chorus conducting according to the requirements of market talent training and the actual learning situation of students [1]. Jansson Dag investigated the

mysterious nature of command behavior. Education and research tend to focus on the gestures of the chorus conductor. At the same time, research shows that compared with other music skills and interpersonal skills, gesture skills rank surprisingly low [2]. Jansson Dag investigated a series of chorus conductors' views on their abilities required for practice, and the contribution of education and experience to their current level of mastery. Collect background data related to academic education and work. This analysis aims to determine the situational degree and universality of various capacity projects [3]. Morrison Sarah investigated the influence of facial expression and command gesture on the perception and overall performance of chorus command. There was no significant difference between participants' scores of chorus conductor performance or ensemble performance [4].

Different researchers have drawn different conclusions about different chorus conducting teaching models. Corbalan Mara described the practice of the two conductors from the aspects of rehearsal structure, main typical activities and some learning dimensions they promoted. He also considered the relationship between the concept of conductor and their practice, and found that there was a strong relationship between theory and practice [5]. Fitzgerald Leahy investigated the overall impact of increasing the response opportunities of teacher guidance on students' behavior results, and differentiated them according to students' response patterns and grade level ratings [6]. Common Eric Alan classifies the evidence-based status of teacher-directed strategies to increase students' reaction opportunities in the whole continuous teaching process, and uses the weighted standard definition method to conduct reasonable research [7]. Savchenko-Shlapak Yuliia introduced the results of an experimental study on the self-education culture formed by future music teachers in vocal music and chorus training, with the purpose of evaluating the development methods of self-education culture formed by future music art teachers in the process of learning vocal music and chorus discipline [8].

Choral conductor has attracted more and more attention with its unique artistic charm and high popularity. Many schools also provide choral conductor courses. The importance of choral conductor training has also been paid more and more attention in music education. It not only improves the singing ability of chorus students, but also improves the overall quality of students' music, plays an important role in the improvement of artistic performance, and is an indispensable link in music teaching. Therefore, the chorus conductor plays an important role not only in improving music learning, but also in improving the overall music performance.

2. Analysis and Comparison of Chinese and Foreign Chorus Conducting and College Teaching Modes

2.1. Analysis of Chinese and Foreign Chorus Conducting Modes

European chorus conductor is a leader in the chorus field and is willing to help understand the development of chorus conductor in the world and its important position.[9] The Swedish Stockholm Symphony Orchestra is composed of selected outstanding performers. Its high-quality performance and understanding of the orchestra have produced incredible artistic influence. Every year, the orchestra and its members are invited to speak in Europe, Japan and South Korea. The Vienna Orchestra not only retains the fine tradition of Vienna music, but also has the international music standards, while retaining the traditional charm of ancient music, and has also made more innovative and rich achievements. Behind the notes played are extraordinary classical music. In China, the career of choral conductor is developed on the basis of extensive and large-scale traditional vocal music activities. In this form, it expresses the needs of the people and the motherland with a strong voice of the times and the people, that is, the needs of the times. There are two aspects in the development of Chinese chorus conductor career: practice precedes theory and

theory follows practice. The Chinese style and movement should be combined with song composition. Only through continuous learning and practice can the command level be improved. The solid composition of Chinese command mainly includes command and vocal music. The chorus command must have good command ability. Only training tools and command techniques are included.

2.2. Teaching Situation of Chorus and Conducting Courses in Chinese Universities

As the core course of university music, chorus and orchestra conducting course aims to cultivate students' ability to perceive and master music rhythm, enable students to appreciate the artistic style of different music works, and improve their overall quality. At present, the teaching of chorus and conducting courses in Chinese universities is still in its infancy. Due to the prejudice in traditional music teaching, some students who study music education in normal schools do not pay enough attention to chorus and conducting process, and have no deep understanding of this field. Most of them are singing and instrumental music. They think that other professional courses, such as dance and music, are more important than chorus and conducting courses, and it is obvious that most students attach importance to professional skills and despise collective cooperation, I believe that as long as their professional skills are well developed, they will achieve high academic achievements. Due to the differences in music foundation, professional level and vocal habits of each student, learning professional skills may not fully meet their requirements. We should pay attention to learning discipline theory and teaching practice, as well as other comprehensive courses of humanistic theory, improve knowledge system and improve self-improvement [10]. At present, many Chinese universities have closed their choral and conducting courses, and the teaching is relatively chaotic. The courses lack systematicness and rationality. Most schools pay more attention to the development of skills and abilities, and provide fewer choral theory and choral composition courses, which will not help improve students' theoretical and practical skills, As shown in Figure 1.

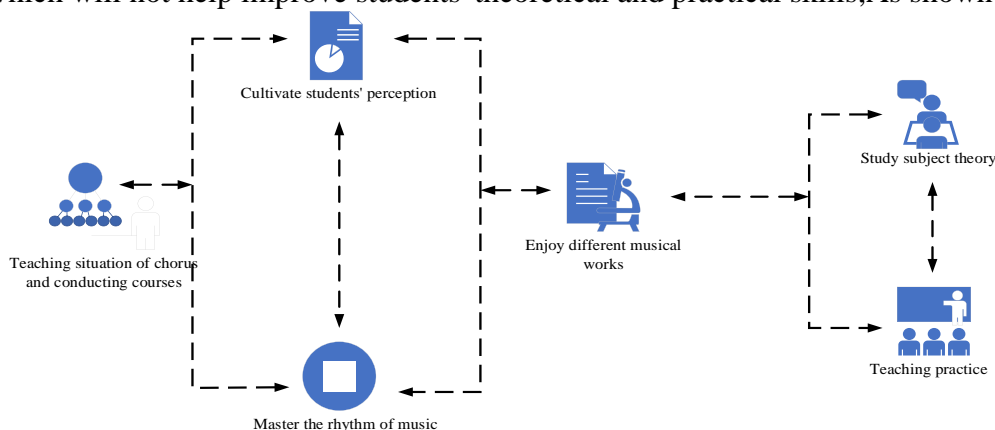


Figure 1: Teaching situation of the chorus and conducting courses in colleges and universities

2.3. Chorus and Conductor Teaching in Foreign Universities

Foreign chorus art has a good tradition, and chorus art has a long history.[11] The teaching system of chorus and command courses in colleges and universities is relatively perfect, showing new features in the implementation of courses, teaching forms, content and evaluation methods, and mastering core and important command skills, so that they can use it in their own subjects and students in the whole learning process of the school. In the postgraduate stage, it is reasonable to create employment opportunities and improve team practice courses, taking into account both the

rich content and the different needs of undergraduates and graduates. The teaching forms of chorus and conducting courses in foreign universities are relatively rich, and different courses have different teaching forms [12]. For example, team technology courses are provided by specialized teachers who introduce students to different styles of chorus works. Through learning the theory of chorus, teachers organize members of chorus to classify and partially adjust teaching. Another example is the practical course of choir conductor, which is taught in small classes. Under the guidance of teachers, students provide more opportunities to practice team roles in turn. In addition, the use of multimedia technology in the teaching process has further changed the teaching mode and enhanced the artistic charm of the classroom. As shown in Figure 2.

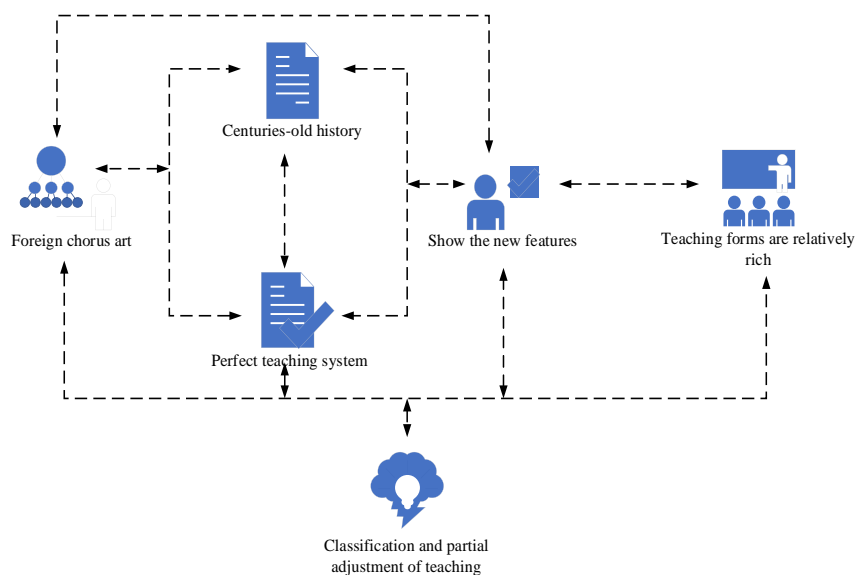


Figure 2: Teaching situation of chorus and conductor in foreign universities

3. Common Features of Chinese and Foreign Chorus Conducting Teaching and Suggestions for Reform of Chorus Conducting Teaching in Chinese Universities

3.1. Common Influence of Chinese and Foreign Chorus Conducting Teaching

In order to give full play to the role of music in modern society and ensure that music education occupies a place in social development, the United States organized a music education conference in Tanglewood, and finally adopted the famous Tanglewood Declaration, which pointed out that the main goal of education should be to develop artistic personality and creativity. Considering the important role of music learning in achieving this goal, it is suggested that music should be teaching-centered. The interpretation also shows that art continues the aesthetic tradition of human history. It believes that music and other forms of art are essentially nonverbal and are closer to psychology and life in the pursuit of human nature and the possibility of self-realization[13]. They believe that music can play a full role as an art, therefore, primary and secondary schools should provide enough time for all kinds of music education, including preschool education, adult education and continuing education.

3.2. Strengthen the Training of Practical Ability

As a practical discipline, choral singing and conducting need professional skills based on theoretical knowledge, which are constantly strengthened in practice[14]. Therefore, teachers

should pay attention to training students' practical skills. More specifically, this can be divided into two aspects. First, improve the relevant education system, enable students to participate in practical work conditionally and systematically, ensure that students participate in practical activities systematically and continuously, and link practice with learning. Students can obtain appropriate credits by participating in practical activities, and encourage them to participate in professional practice. This not only cultivates their professional skills, but also reduces the learning burden of students. On the other hand, it is necessary to establish an internship base to allow choir members to participate in various competitions and performances, give students more internship opportunities, let students connect with the society, improve self-confidence, and improve professional skills [15]. In short, the reform of college chorus and conducting courses is inevitable, and this reform will provide a good solution to the problems existing in modern education, as shown in Figure 3. In order to effectively improve the teaching level of the command major in universities and achieve excellent chorus, it is necessary to train the command personnel, promote the development of Chinese chorus art and promote the prosperity of Chinese chorus cause.

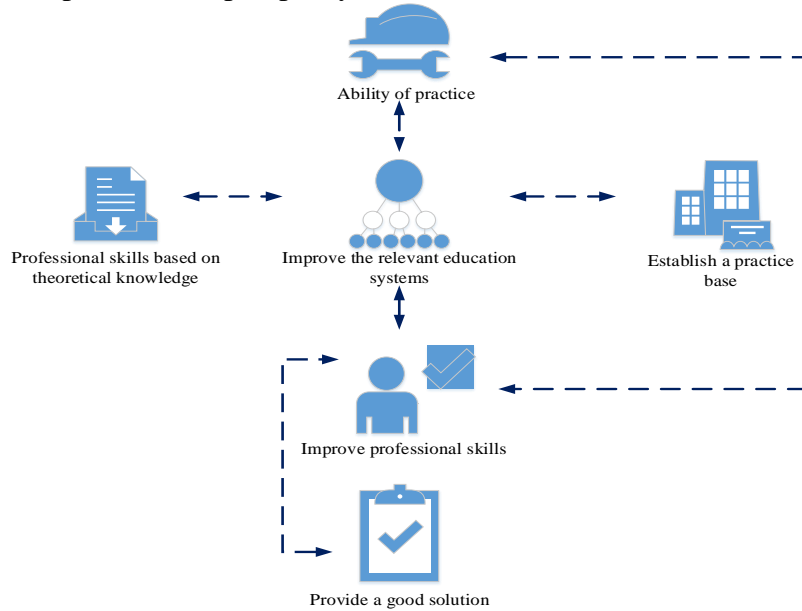


Figure 3: Strengthen the cultivation of practical ability.

4. Use Machine Learning Algorithm to Strengthen the Comparative Analysis of Chorus Conducting Teaching Modes in Chinese and Foreign Universities

As a linear regression algorithm, machine learning algorithm is often used to compare different conditions of various production and teaching modes under different modes. As the most basic machine learning algorithm, linear regression can be classified into univariate linear regression and multiple linear regression. Take binary linear regression as an example, its basic form is:

$$p_{\varepsilon}(\alpha) = \varepsilon_0 + \varepsilon_1\alpha_1 + \varepsilon_2\alpha_2 \quad (1)$$

$$p_n(\alpha) = \varepsilon_1\alpha_1 + \varepsilon_2\alpha_2 + \dots + \varepsilon_n\alpha_n \quad (2)$$

In the formula, α as a feature property, ε for model parameters, $p_{\varepsilon}(\alpha)$ for the model, the contrast ratio is:

$$contrast = \frac{1}{m} \sum_{i=1}^m (\beta^{(i)} - \beta^{(i)})^2 \quad (3)$$

$$contrast = \frac{1}{m-n} \sum_{i=1}^m (\beta^{(i)} - 1) \quad (4)$$

$$\beta_i = \frac{n + m(\beta - 1)}{n} \quad (5)$$

$\beta^{(i)}$ for the target value, m for sample coefficients, the contrast function is iterated to calculate the contrast weight weight.

5. Using Machine Learning Algorithm and Experimental Investigation and Analysis

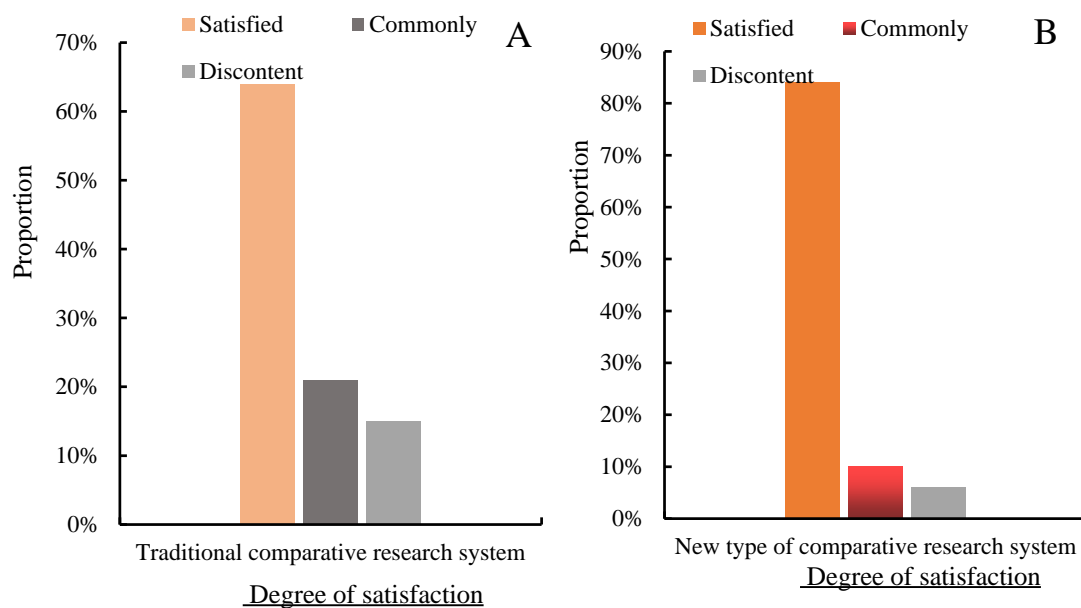
At present, social informatization is strengthened, and exchanges at home and abroad are increasingly frequent. For further investigation of the Chinese and foreign universities chorus command teaching mode research contrast present situation, the investigation of a city of colleges and universities, investigate different university members of the chorus command teaching mode of the study of satisfaction, select three universities, adopt the method of questionnaire survey, investigated the three universities chorus students of the current chorus command teaching mode research contrast accuracy, rationality, detail, survey of the three universities for A, B, C, survey of students including foreign students, students and domestic students, the number of 150 people, the survey situation as shown in table 1.

Table 1: Satisfaction of university choir members with the current teaching mode of Chinese and foreign chorus conductor.

	Accuracy	Rationality	Detailed degree
A	61%	43%	68%
B	53%	56%	53%
C	64%	46%	71%

From Table 1, it can be seen that the accuracy, rationality and detail of the chorus students of University A in the comparison of the current Chinese and foreign chorus conducting teaching models are 61%, 43% and 68% respectively. The accuracy, rationality and detail of the chorus students of University B in the comparison of the current Chinese and foreign chorus conducting teaching models are 53%, 56% and 53% respectively, The accuracy, reasonableness and detail of the current Chinese and foreign choral conducting teaching model research and comparison of chorus students in C universities account for 64%, 46% and 71% respectively.

In order to compare the current research situation of chorus conducting teaching mode in Chinese and foreign universities, machine learning algorithm is introduced into the comparative construction of chorus conducting teaching mode research, and a new comparative research system is constructed. In order to investigate in detail the different effects of the comparison system of the traditional chorus conducting teaching mode and the new chorus conducting teaching mode, we investigated the satisfaction comparison between the traditional and the new chorus conducting teaching mode of a university choir members. We investigated 100 students, and the satisfaction was satisfactory, average, and unsatisfactory. The specific effects are shown in Figure 4.



A: Traditional comparative research system B: New type of comparative research system

Figure 4: Different effects of the comparison system of the traditional choral conductor teaching mode and the new choral conductor teaching mode.

Figure 4A shows people's satisfaction with the traditional comparative research system, and Figure 4B shows people's satisfaction with the new comparative research system. As can be seen from Figure 4A, students' satisfaction with the comparison system of traditional chorus conductor teaching mode is 64%, generally 21%, and 15% are dissatisfied. As can be seen from Figure 4B, among the 100 students surveyed, the machine-learning algorithm was introduced into the comparative construction of chorus conductor teaching mode, and the satisfaction of the new comparative research system was 84%, generally 10% and 6% dissatisfied. According to the experiment and investigation, the machine learning algorithm is introduced into the research and comparison construction of chorus conductor teaching mode and the construction of a new comparative research system can increase the satisfaction by 20%.

6. Conclusion

Through the comparative study of chorus conducting teaching and learning at home and abroad, this paper analyzes the differences and many problems in chorus conducting teaching and teaching at home and abroad, which provides a basis for the ongoing teaching reform. It provides a useful learning concept to promote the development of Chinese chorus conducting and learning. Chorus is an art that reflects the popularity of music and the development level of the country and society. There are strict requirements for the education of choral conductor. It is necessary to cultivate high-quality choral conductor. They should not only have the basic knowledge of conductor, but also have important comprehensive training courses, such as basic theoretical knowledge. We should learn from the experience of foreign excellent chorus teachers, master advanced teaching concepts, promote the reform of Chinese chorus command, popularize the concept of high-level chorus training, and improve the overall command ability of chorus.

References

[1] Bland M. (2020) Graduate School Auditions for Choral Conductors. *The Choral Journal* 61.1, 77-79.

- [2] Jansson D. and Anne H.B. (2021) Choral conducting education: The lifelong entanglement of competence, identity and meaning. *Research Studies in Music Education* 43.3, 347-365.
- [3] Jansson D., Beate E. and Erik D. (2019) Universality and situatedness in educating choral conductors. *Music Education Research* 21.4, 344-358.
- [4] Morrison S. (2021) *The Global Pandemic and Choral Music in Canada: Challenges, Discoveries, and Moving Forward*. *The Canadian Music Educator* 62.3, 34-39.
- [5] Corbalan M. (2019) Choral conductors to stage! What kind of learning do they claim to promote during choir rehearsal? *International Journal of Music Education* 37.1, 91-106.
- [6] Fitzgerald L., Lauren R., Faith G.M. and Alyssa A.S. (2019) Effects of teacher-directed opportunities to respond on student behavioral outcomes: A quantitative synthesis of single-case design research. *Journal of Behavioral Education* 28.1, 78-106.
- [7] Common E.A. (2020) Teacher-delivered strategies to increase students' opportunities to respond: A systematic methodological review. *Behavioral Disorders* 45.2, 67-84.
- [8] Savchenko-Shlapak, Y. (2022) Self-education culture of future music teachers: diagnostic and formative methods. *Amazonia Investiga* 11.51, 129-139.
- [9] Finkelstein S., Umesh S. and Brett F. (2021) The inclusive practices of classroom teachers: a scoping review and thematic analysis. *International Journal of Inclusive Education* 25.6, 735-762.
- [10] Li Y.F. (2020) Application of computer-based auto accompaniment in music education. *International Journal of Emerging Technologies in Learning (iJET)* 15.6, 140-151.
- [11] Brunkan M.C. and Emily M.M. (2019) A comparison of laboratory and virtual laryngeal dissection experiences on preservice music educators' knowledge and perceptions. *Journal of Voice* 33.6, 872-879.
- [12] Ge Tian, Thanawan Phongsatha, and Naree Achwarin. "The Application of Virtual Reality Technology to Enhance Students' Chorus Conducting Performance in a Technology Institute in Southeast China." *ABAC ODI JOURNAL Vision. Action. Outcome* 10.1 (2022): 134-152.
- [13] Bland Micah. "Graduate School Auditions for Choral Conductors." *The Choral Journal* 61.1 (2020): 77-79.
- [14] Bekpolatova Altinay Kuandikovna. "An Innovative Approach to Teaching Music Choral Conducting." *Vital Annex: International Journal of Novel Research in Advanced Sciences* 2.3 (2023): 115-119.
- [15] Narverud Jacob. "Choral Conversations." *The Choral Journal*. 2.4 (2021): 69-72.