Research Article

Study on Aesthetic Teaching Methods in Ethnic Music Teaching in Universities in the Context of Intelligent Internet of Things

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Received 1 July 2022; Revised 25 July 2022; Accepted 30 July 2022; Published 22 August 2022

Academic Editor: M. A. Rashid Sarkar

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Folk vocal music is an important part of music majors in colleges and universities (CaU), and the core of music education is AE. Therefore, in vocal music teaching, students should be guided to understand the beauty of music and to use vocal performance as an aesthetic experience so as to cultivate their aesthetic appreciation ability. As one of the national musical instruments, Chinese Zither has a unique musical charm. Its traditional aesthetic value is high, which can bring people beautiful music enjoyment. This paper takes Chinese Zither as an example to study the aesthetic teaching methods in college national instrumental music teaching. In the process of research, we use a combination of a variety of research methods to study two classes of music major in our school. This paper first uses the literature analysis method to elaborate the AE and then uses the questionnaire survey method to study the college students’ understanding and views on the national instrumental music. Then, through the case analysis method, it analyzes the achievements and interest changes of the students after the introduction of aesthetic teaching in Chinese Zither teaching. At the same time, through expert interviews, it summarizes the teaching of national instrumental music in the CaU aesthetic teaching strategy and the use of mathematical analysis on the relevant data processing. This study found that before the introduction of aesthetic teaching in Chinese Zither teaching, the good rate of class 2 students was only 33.33%, and after the introduction of aesthetic teaching in Chinese Zither teaching, the good rate of students in class 2 reached 86.67%. Therefore, the introduction of aesthetic teaching in Chinese Zither teaching can effectively improve students’ learning level. This also shows that in the teaching of ethnic music, the introduction of aesthetic teaching and the combination of aesthetic art and music art can effectively improve the learning level of students.

1. Introduction

Aesthetic education is the combination of aesthetic teaching and aesthetic teaching. Through education, people’s ability to recognize beauty, understand beauty, appreciate beauty, and create beauty is improved. It is an important focus for cultivating socialist builders and successors with the all-round development of morality, intelligence, physique, beauty, and labor in the new era and plays a unique and irreplaceable role in “Lide Shuren.” Among them, art is the most concentrated and typical form of aesthetic education. National music teaching in CaU is an important way to inherit national music culture, and different national musical instruments represent different national culture. The process of learning musical instruments is also an important way to cultivate students to feel and discover beauty. The purpose of improving the aesthetic consciousness is to learn the national music culture more comprehensively and deeply so as to improve the performer’s performance skills and the emotion expressed in the performance. Implementing aesthetic education (AE) in college folk vocal music teaching can improve students’ music appreciation ability, expand their knowledge level, and develop comprehensively and harmoniously.

Ethnic vocal music teaching is a part of art education, including art education in quality education. Therefore, ethnic vocal music teaching is an education to improve the quality of ethnic education and to enhance ethnic integration and unity. In order to arouse the high attention of all
departments to support and help the teaching of ethnic instruments, Locke explored the methods of art education in Ethnic Universities in a certain region and put forward some countermeasures to further improve the teaching of ethnic instrumental music in this region. Locke's research is more inclined to theoretical research, there is no data as a reference, and the reference value is not great [1, 2]. AE in CaU is a major issue of concern to the AE circles, education circles, and the people. Lonsdale believed that the aesthetic quality is always an important standard to measure people’s overall quality and has comprehensive functions. Strengthening AE is the necessity of the times and meets the needs of improving the overall spiritual level of the country. Lonsdale pointed out that the AE of national CaU should take the cultivation of students' aesthetic ability and innovation ability as the starting point. It should not only pay attention to the theoretical AE but also pay attention to the practical AE so as to cultivate students' noble aesthetic concept and perfect personality and realize the all-round development of human beings. Lonsdale's research has a certain reference value for AE in CaU; he used mathematical statistical methods to compare and analyze the teaching methods of 10 investigators and explained that aesthetic education plays an important role, but the research has no data to explain, so its reliability is not high [3]. One-to-one music class is a common and effective way to learn musical instruments. Werner took the one-to-one music teaching in middle school as the research object and discussed the music teaching performance of two brass string teachers. Werner recorded the classroom teaching videos of the two teachers and two students over a six-week period and analyzed the data. In Werner’s study, the number of samples is too small to be of reference value [4].

This paper takes two classes of music majors in our school as the research object using the method of literature analysis and other research methods. In the process of research, we analyzed the necessity of AE in the teaching of national instrumental music by searching for relevant materials. Then, through the combination of questionnaire survey and case analysis, we first investigated the college students’ understanding and views on national instrumental music. Then, taking Chinese Zither teaching as an example, we introduced aesthetic teaching and analyzed the changes of students before and after the introduction of aesthetic teaching it is analyzed. Finally, through the expert interview method, this paper summarizes the aesthetic teaching strategies in college Chinese Zither teaching. The study found that after the introduction of aesthetic education, the study of folk music will be more interesting, which will increase students’ interest in learning, and after adding aesthetic education, classroom learning will not be so boring, which will further increase students' enthusiasm for learning.

2. National Instrumental Music and AE

2.1. The Dilemma of Traditional Ethnic Musical Instruments

2.1.1. Traditional Ethnic Musical Instruments Are “Coldly Treated”. National musical instruments refer to the unique musical instruments of China. Nowadays, there are generally popular qin, zheng, xiao, flute, suona, erhu, pipa, silk bamboo, drum, etc., which are musical instruments representing traditional Chinese music culture. Traditional ethnic musical instruments have some shortcomings, such as imperfect sound quality, inconsistent rhythm, unbalanced volume, inconvenient tuning, inconsistent pitch standards among fixed-pitch instruments, and lack of mid-bass instruments in comprehensive bands. Since the 21st century, people's living standards have been continuously improved, and people have paid more attention to children’s education. It has become a common phenomenon for students to learn music after class. However, many children and parents tend to prefer western musical instruments such as bel canto, piano, violin, and so on, and fewer people choose Chinese traditional instrumental music [5].

2.1.2. Traditional Folk Vocal Works Are Not Widely Distributed. There is also the fact that the publication and distribution of traditional music works are only carried out by a few publishers. Factors such as limited distribution, low quantity, and high prices have become constraints on the development of folk instrumental music and have made traditional vocal music little known to the general public [6, 7].

2.1.3. The Impact of Fast Food Culture. When the classical music flows out, you can clearly see that what flows in the air is high mountains, flowing water, silk and bamboo, winter snow, and eternal life. Moving is the beauty of Chinese classical music. With the rapid development of society, people enter into a fast-paced life, and people have more and more choices. “Fast food music” is also the product of the times. With the rapid development of society, many people are impetuous. It is difficult to calm down to taste some profound classic works and abandon “products” for “fast.” To some extent, fast food music can relieve and relax emotions. It is undeniable that fast food music has enriched the entertainment life of the public, but fast food culture [8].

2.2. The Necessity of AE in the Teaching of Folk Vocal Music

2.2.1. AE Can Promote the Teaching of Folk Vocal Music. Aesthetic education in Chinese socialist schools serves to build socialist spiritual civilization and cultivate students' spiritual beauty and behavioral beauty. Aesthetic education can promote students’ moral, intellectual, and physical development. It can improve students' thinking and develop students' moral sentiment, enrich students' knowledge and develop students' intelligence, improve people's physical and mental health and the quality of sports, encourage students to love labor and the working people, and carry out creative labor. By cultivating students' aesthetic ability, students' understanding of national musical instruments can be improved to a certain extent. The organic combination of AE and folk vocal music teaching can make students develop more fully in the field of art and promote the healthy development of students’ body and mind [9, 10].
2.2.2. AE Is an Integral Part of Quality Education. Aesthetic education refers to the education of people's aesthetics. That is, by cultivating people's ability to recognize beauty, experience beauty, feel beauty, appreciate beauty, and create beauty so that we have the ideal of beauty, the sentiment of beauty, the character of beauty, and the quality of beauty. Improving the aesthetic quality plays an important role in music appreciation and music creation ability. In China's modern education system, quality education is the foundation of the whole education and teaching system, and AE is an important part of quality education. Therefore, our education system should pay attention to students' AE. AE can not only improve students' ability of feeling, appreciating, and creating beauty but also help students establish ideal and aesthetic feeling, enhance their own virtues, and realize the all-round and healthy development of body and mind. Therefore, good AE can effectively achieve the educational goal of quality education [11, 12].

2.2.3. Intelligent Internet of Things. The traditional Internet is mature and widely used, but there are still security loopholes. As an emerging product, the intelligent Internet of Things has a more complex architecture, no unified standards, and more prominent security issues in all aspects. The key implementation technology is the sensor network. In the natural environment where sensors are exposed, especially some sensors placed in harsh environments, how to maintain the integrity of the network for a long time puts forward new requirements for the sensor technology healing function. This is not only affected by environmental factors, but the impact of human factors is also more severe. RFID is another key implementation technology, which is to put electronic tags into the items in advance to achieve real-time monitoring. This will inevitably lead to some personal privacy exposure for the owners of some tags, and there are problems with the security of personal information. Not only personal information security but also cooperation between enterprises and countries is quite common nowadays. Once the network is attacked, the consequences will be even more unimaginable. How to achieve the balance between informatization and security in the process of using the Internet of Things is very important.

3. Chinese Zither

Guzheng, a plucked stringed musical instrument, also known as Hanzheng and Qinzheng, is an ancient national musical instrument of the Han nationality and is popular all over China. It is often used for solo, duet, instrumental ensemble and accompaniment of song and dance, opera, and folk art. Because of its wide range, beautiful timbre, rich playing skills, and strong expressiveness, it is known as the “King of Music,” also known as “Oriental Piano,” and is one of China’s unique and important national musical instruments. Taking the guzheng as the research object is more representative.

3.1. An Overview of Chinese Zither. Chinese Zither is an ancient national musical instrument, which is accompanied by Chinese culture with a long history [13, 14]. The ancients described the vivid scenes of traditional Zheng music as “the husband hits the urn and knocks fou, plays the zither and beats the legs, and the song is blare. Those who are quick to hear and see are also the voice of Qin. The earliest three string and eight string zither are the most popular (called fense Zheng). In Tang and Song dynasties, thirteen string Chinese Zither appeared and then increased to 16, 18, 21, and 25 strings. Currently, 21-string Chinese Zither is commonly used [15]. Usually, S21 is used in front of the model of Chinese Zither. S stands for s-shaped mountain, which is jointly invented by Wang Xuzhi and Miao Jinlin. 163 represents that the length of Chinese Zither is about 163 cm, and 21 represents the number of strings of zither [16, 17]. The structure of the guzheng is composed of a panel, a wild goose column, a string, a front mountain, a string pin, a tuning box, a piano foot, a back mountain, a side plate, a sound outlet, a bottom plate, and a string hole. The shape is a rectangular wooden speaker, and the string frame “zheng column” (i.e., wild goose column) can move freely, one string and one note, arranged according to the pentatonic scale.

3.2. Aesthetic Characteristics of Chinese Zither Art

3.2.1. Distinctive Regional Characteristics. During the spring and autumn period and the Warring States period, Chinese Zither was widely spread in the state of Qin and then gradually developed to Shandong, Henan, Fujian, Zhejiang, and other places. Due to the influence of different regional styles, political background, languages, and other factors, Chinese Zither shows different musical charm with local characteristics in different places. For example, the style of Shandong Chinese Zither is elegant and simple [18, 19]. Chaozhou guzheng is mostly played solo and is good at playing the strings with the right hand. Its timbre is soft, the melody is gorgeous, and the tune is fresh and flexible. Hakka Chinese Zither can be played alone, but it is often combined with Sanxian, Dongxiao, Pipa, and so on. It is rich and elegant with long lasting charm.

3.2.2. The Theme Is Rich and Diverse. The subjects of Chinese Zither art in China are rich and diverse, some of which show cultural customs, such as “making fun of the Lantern Festival” and “qingfengnian” [20, 21]. Some draw materials from nature and express their feelings by scenery, such as “plum blossom Sannong” and “high mountains and flowing water.” Some eulogized heroes, such as “overlord’s removal of armor” and so on. Some express the feeling of missing, such as “thinking in autumn night,” “deep night,” etc. The rich and diverse themes provide a continuous driving force for the development of Chinese Zither art. The music styles of different regions and different times react on the natural features, national characteristics, customs, and cultures. Taking the Chinese Zither as the carrier, the connotation of Chinese Zither can be brought into full play.

4. Research Methods and Experimental Design

4.1. Research Object. In this paper, 60 students from two classes (Class 1 and Class 2) of music majors in our school
are used to study the aesthetic teaching methods in teaching folk vocal music in CaU, taking the Chinese guzheng as an example.

4.2. Research Methods

4.2.1. Literature Analysis. In this paper, through consulting and collecting literature, the relevant data are sorted out, analyzed, and classified. We use excellent school library resources, reference room resources, network resources, academic journal resources, etc., to collect relevant literature and materials such as teaching theory, psychological theory, system science theory, instrumental performance and teaching, Chinese Zither teaching, and so on to provide a theoretical basis for this study.

4.2.2. Questionnaire Survey. Questionnaire survey refers to a method of collecting data by formulating a detailed questionnaire and asking respondents to answer accordingly. The so-called questionnaire is a set of questions related to the research objectives, or a question form prepared for the investigation, also known as a questionnaire. It is a common tool used by people to collect data in social survey research activities. With the help of this tool, researchers can accurately and specifically measure the process of social activities and apply sociological statistical methods to describe and analyze the quantity to obtain the required survey data. In the study, we used the method of questionnaire survey, designed the questionnaire according to the content of the research, made it into a standard form, and distributed the questionnaire within the scope of the investigated objects.

4.2.3. Case Analysis. Taking Chinese Zither teaching as an example, this paper analyzes the relationship and corresponding paradigms between teachers’ teaching and students’ learning, taking the manifestation of teaching information structure as the development clue.

4.2.4. Expert Interview. Interview with relevant experts, inquire about the aesthetic teaching strategies in the teaching of national instrumental music in CaU, and make a summary and analysis.

4.2.5. Mathematical Statistics. Mathematical statistics is a branch of mathematics divided into descriptive statistics and inferential statistics. It is based on probability theory and studies the statistical regularity of a large number of random phenomena. The task of descriptive statistics is to collect data, organize, group, compile frequency distribution tables, draw frequency distribution curves, and calculate various characteristic indicators to describe the central tendency, out-of-center tendency, and frequency distribution skewness of data distribution. Inferential statistics is based on descriptive statistics, inferring and predicting the population according to the regularity of the sample data. In the process of data processing, we use the following formula:

\[
\begin{align*}
\text{(1) Mean value} & \quad \bar{x} = \frac{1}{n} \sum_{i=1}^{n} x_i. \\
\text{(2) Variance} & \quad S^2 = \frac{1}{n-1} \sum_{i=1}^{n} (x_i - \bar{x})^2. 
\end{align*}
\]

4.3. Experimental Design

4.3.1. Questionnaire Distribution. In the form of questionnaire survey, this paper studies the current teaching of national instrumental music in CaU, gives questionnaires to 60 students in two classes of music major in our university, and takes Chinese Zither as an example to explore.

4.3.2. Teaching Case Development. Taking the Chinese Zither teaching as an example, the teaching of Chinese Zither is carried out in two classes. Class 1 adopts the traditional teaching method, and class 2 introduces AE in the process of Chinese Zither teaching on the basis of traditional teaching, infiltrates AE in the teaching process, and expands students’ aesthetic skills.

5. Analysis and Discussion of Research Results

5.1. Analysis of Students’ Views on National Instrumental Music. In the form of a questionnaire, two classes of music majors in our school were surveyed to study their views and interests in folk vocal music.

5.1.1. Analysis of Students’ Understanding and Interest in Folk Vocal Music. The level of understanding is divided into three levels: A, B, and C, corresponding to very understanding, understanding, and not understanding, respectively. Similarly, the degree of interest is divided into three levels: A, B, and C, which correspond to very interested, interested, and not interested, respectively. The students’ understanding and interest in ethnic vocal music in both classes were then analyzed. The results are shown in Table 1 and Figure 1.

From Table 1 and Figure 1, it can be seen that the students of two classes of music majors in our school do not have a high degree of knowledge and interest in folk vocal music. Among them, 2 people (3.33%) know folk vocal music very well, 10 people (16.67%) know folk vocal music generally, and 48 people (80%) do not know folk vocal music. In addition, 6 people (10%) were very interested in folk vocal music, 18 people (30%) were generally interested in folk vocal music, and 36 people (60%) were not interested in folk vocal music.

5.1.2. Students’ Perceptions of Ethnic Vocal Music. The results are shown in Figure 2.
As can be seen from Figure 2, among these two classes, 14 people, or 23.33%, think that folk vocal music has no future; 15 people, or 25%, think that folk vocal music is too difficult; and 18 people, or 30%, think that folk vocal music is rather dull and boring. On the other hand, 5 people think that folk vocal music has classical beauty, accounting for 8.33%; 4 people think that folk vocal music has great connotation, accounting for 6.67%; and 4 people think that folk

Table 1: Students’ understanding and interest in national instrumental music.

<table>
<thead>
<tr>
<th>Type</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree of understanding</td>
<td>2</td>
<td>4</td>
<td>54</td>
</tr>
<tr>
<td>Degree of interest</td>
<td>6</td>
<td>18</td>
<td>36</td>
</tr>
</tbody>
</table>

Figure 1: Analysis of students’ understanding of and interest in ethnic vocal music.

Figure 2: Two classes’ views on ethnic vocal music.
vocal music can cultivate body and mind, accounting for 6.67%. It can be seen that the students’ overall evaluation of folk vocal music is not very good.

5.2. Case Analysis of Chinese Zither Teaching in CaU.

Before the introduction of aesthetic teaching, this paper analyzes the students’ views on the existing teaching methods in the two classes, and the results are shown in Figure 3.

It can be seen from Figure 3 that before the introduction of aesthetic teaching, 2 students in class 1 were very satisfied with the existing teaching methods, accounting for 6.67%; 8 students were satisfied, accounting for 26.67%; and 20 students were dissatisfied, accounting for 66.67%. In class 2, one student was very satisfied with the existing teaching methods, accounting for 3.33%; 7 students were satisfied, accounting for 23.33%; and 22 students were dissatisfied, accounting for 73.33%. It can be seen that the two classes are not satisfied with the existing Chinese Zither teaching methods.

In addition, the satisfaction of class 2 after the introduction of aesthetic teaching is shown in Table 2.

<table>
<thead>
<tr>
<th>Satisfaction</th>
<th>Very satisfied</th>
<th>Satisfied</th>
<th>Dissatisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of people</td>
<td>10</td>
<td>16</td>
<td>4</td>
</tr>
<tr>
<td>Proportion</td>
<td>33.33%</td>
<td>53.33%</td>
<td>13.33%</td>
</tr>
</tbody>
</table>

The results show that after the introduction of aesthetic teaching, the satisfaction of class 2 has improved significantly, with 10 students (33.33%) very satisfied, 16 students (53.33%) satisfied, and 4 students (13.33%) dissatisfied.

Figure 3: Analysis of the existing teaching methods of the two classes.

Figure 4: Analysis of the level of Chinese Zither in class 2 before and after the introduction of aesthetic teaching.

Table 2: Class 2 satisfaction after the introduction of aesthetic teaching.

5.3. Aesthetic Teaching Methods in Chinese Zither Teaching in CaU.

After the introduction of aesthetic teaching, students’ attitude towards Chinese Zither has changed significantly. We use the expert interview method to discuss the aesthetic teaching methods of national instrumental music in CaU and draw some strategies. Now we classify and summarize them, and the results are shown in Figure 5.

The level of Chinese Zither is divided into three levels: excellent, good, and general. Before and after the introduction of aesthetic teaching, the level of Chinese Zither of class 2 students is analyzed. The results are shown in Figure 4.

It can be seen from Figure 4 that before the introduction of aesthetic teaching into Chinese Zither teaching, there are 8 students in the excellent level, 18 students in the good level, and only 4 students in the general level. The good rate reaches 86.67%. Therefore, the introduction of aesthetic teaching in Chinese Zither teaching can effectively improve the students’ learning level.

As shown in Figure 5, in order to better apply aesthetic teaching in the teaching of folk vocal music in CaU, teachers must take a more active part in the teaching process, define teaching objects, and integrate teaching elements. Furthermore, in order to effectively apply aesthetic teaching in the folk vocal music instruction in CaU, it is more vital to grow students’ appreciation ability, comprehend the meaning of associated cultures, and increase students’ aesthetic experience.

Figure 5: Aesthetic teaching methods in the teaching of folk vocal music in CaU.
6. Conclusions

In this paper, we found that the current college students, who do not know much about folk vocal music, and mostly think that it is rather boring and difficult to understand, and has no future development. In addition, we found that students’ interest and level of Chinese guzheng have been greatly improved after the introduction of aesthetic teaching. Finally, we think that in the teaching of folk vocal music in CaU, we should give full play to the leading role of teachers, clarify the teaching objects, and integrate the teaching contents. In addition, it is more important to cultivate students’ appreciation ability, understand the connotation of related cultures, and strengthen students’ aesthetic experience so as to better carry out the aesthetic teaching in folk vocal music teaching in CaU.

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 that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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