

Research Article

Teacher-Student Interactive Creation Strategies in Music Teaching Assisted by Computer Information Technology

Ye Huang 

College of Arts, Xiamen University, Xiamen 361000, China

Correspondence should be addressed to Ye Huang; hy7825@xmu.edu.cn

Received 21 May 2022; Revised 19 June 2022; Accepted 23 June 2022; Published 8 July 2022

Academic Editor: Naeem Jan

Copyright © 2022 Ye Huang. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

In music learning, the mobilization of students' learning subjectivity needs the correct guidance of music teachers. Under the correct guidance of music teachers, students can exert their subjective initiative to realize the role of the main body of learning. In music classes, high-quality contact between teachers and students is required to meet the goals of teacher supervision and student subjectivity. This paper presents a music education approach based on a computer-assisted system and the realities of music education in China's elementary and secondary schools. This strategy can specifically solve the problems existing in the interaction between teachers and students in Chinese music education. Furthermore, based on the actual effect of this system in music teaching for various age groups, a strategy for implementing high-quality teacher-student interaction in music teaching is proposed. The effectiveness of the system is also analyzed. This work studies the interactive creation strategy of teachers and students in music education through the computer information technology-assisted system.

1. Introduction

Interaction is an important link in human cognition and plays a crucial role in the process of human cognition. Interaction is the most effective means of acquiring knowledge and information after communicating with others, and it is also an integral part of human life. At the end of the nineteenth century, sporadic studies on teacher-student interaction in the teaching process began to appear in the world. All kinds of schools were developing rapidly. In 1987, the Institute of International Education issued a report that the frequent contact and communication between students and teachers in the classroom was an effective way to greatly improve the teaching effect. Chinese scholars published the book "The Art of Interaction between Teachers and Students" for the first time, pointing out that teaching was a process in which students communicated and interacted actively with teachers and learned subjectively under the guidance of teachers.

Currently, domestic researchers' research on music appreciation teaching methodologies in elementary and secondary schools relies primarily on theoretical thinking.

These studies are all about traditional and creative teaching, and there is a distinct paucity of study on music teaching methodologies aided by computer information technology. Asmus (2021) discussed the motivation of music teaching and learning and further explained the role of interaction in music education [1]. Innovative teaching models required tripartite efforts by schools, teachers, and students [2]. Kalyani (2018) discussed the advantages and disadvantages of the traditional music education model in schools and put forward constructive opinions [3]. Through an examination of the research state of the traditional music education paradigm, it is discovered that there is a lack of connection between teachers and students in music teaching. Mechanical teaching is very extensive, which is also the starting point of this work to formulate the creative strategy of teacher-student interaction.

The teaching-assistance system is being built. Through a questionnaire survey, case study, and analysis of the existing condition of teacher-student interaction in music teaching at various ages, the most appropriate teaching methodologies for music appreciation are investigated.

The paper's organization paragraph is as follows: Section 2 discussed the methods of the proposed work. Section 3 discusses the results and the discussion. Finally, in Section 4, the research work is concluded.

2. Methods

2.1. The Concept of Interactive Teaching and Its Theoretical Basis. Teaching, that is, interactive is a dynamic process. The direct interaction between professors and students is crucial in this dynamic process [4]. Teachers serve as facilitators in instructional activities, with students serving as the primary source of information. The classroom teaching objectives are completed through the collaboration and interaction of the two. Jo and Cho (2021) mentioned that teachers' teaching and students' learning complemented each other in the learning process, and the two entered a benign and orderly teaching development track [5]. A harmonious teacher-student relationship can be formed through interactive teaching. Under the interaction of this harmonious teaching relationship, there is a good situation of teacher-student interaction and student-student interaction, which facilitates the influence of the teaching environment on the teaching effect. Teachers and students achieve a kind of trust and resonance in the teaching relationship, which can improve teaching efficiency. Vygotsky's "interpersonal interaction" learning concept is explained in this way [6]. In his view, the cognitive process of individuals will change accordingly under the influence of the social environment. However, individual cognition is not entirely dependent on the outside world. Although autonomous activities have a strong influence on an individual's inner world, external effects cannot be overlooked. From the standpoint of interpersonal learning, he elaborates on the importance of the environment on individual growth. He explains the role of the environment on individual development from the perspective of interpersonal learning. He proposes that individual cognitive development is the collision between the individual and the surrounding environmental factors (learning environment and surrounding people) to obtain a good understanding of things [7, 8].

Interpersonal interaction can be extended to the teaching process of education, which is a teaching process theory derived from teachers and learners [9]. In the teaching process, teachers, learning, and the environment interact with each other to produce positive interactions and achieve the common development of learning. The growth and development of learners' individual and creative thinking is emphasized in intentional humanism ideology. The ultimate training goal is for students to realize their own worth. The notion of student-centered instruction has long been emphasized in the humanistic care theory. In the teaching interaction, it is necessary to give students the right to self-selection and self-discovery and actively carry out teaching exploration [10].

2.2. Teaching Implementation of Computer Information Technology-Assisted System. The students' preclass preparation work is to collect the audio files of gongs and drums

from the Internet and conduct appreciation learning to acquire a preliminary impression of the music. Before class, these audio files are copied to the teacher's player. At the beginning of the course, the relevant type of music audio is played through the portable player. Then, students will discuss the following questions in groups: (1) "Why are you attracted to music?" (2) "What attracts you to this piece of music?" Interaction between students is effective through discussion. After the group discussion, the students are invited to answer questions on behalf of the group. The teacher summarizes and affirms the students' speeches. Meanwhile, students also randomly expand their music knowledge. They know that the three elements of music are rhythm, melody, and harmony. Rhythm is the most basic element. Music can have no harmony and no melody, but it must have rhythm. The most basic style of drumming, for example, is simply rhythm music. The teacher employs portable players to play student-specific music throughout the music appreciation stage and guides students to brainstorm in a democratic, egalitarian, free speech, relaxing, and pleasant environment. Students can discuss the aesthetic performance of music and understand the emotion of music, thereby deepening the understanding of the beauty of music and expanding the scope of music knowledge. In the process of discussion, teachers need to affirm, accommodate, and respect the opinions of students and give correct answers as "leaders of equal discussion".

Teachers create a lively and enthusiastic classroom atmosphere. Then, the students are free to express their views and ideas in interactive discussions. Some students also come up with creative and unique ideas. The music is taken as an example, and the pipa often "relays" with gongs, drums, erhu, and other instruments. The baton is passed to the pipa, and the pipa begins to play. Besides, teachers comment on the students' playing sounds of pipa, gong, drum, and erhu. These sounds are all composed of instruments that are played in the same or similar way. When the composer creates "Harvest Gongs and Drums," he uses the dubbing method of combining advance and retreat in traditional folk music Jiangnan sizhu. The "retreat" of one part will inevitably lead to the "advance" of another part. The instruments in each part are "relaying", so it makes the creative process quite interesting. Therefore, the in-depth interaction between teachers and students activates students' thinking and creates favorable conditions and opportunities for teachers to expand teaching content.

2.3. Investigation of Teacher-Student Interaction in Music Teaching at All Ages. The author randomly selects 20 music teachers and 200 students from 10 junior high schools to conduct a questionnaire survey. A total of 20 questionnaires are distributed to teachers. Both the recovered questionnaire and the valid questionnaire are a total of 20 copies. The recovery rate and the effective rate are both 100%. A total of 200 questionnaires are distributed to students, 190 questionnaires are returned, and 185 are valid questionnaires. The recovery rate is 95%, and the effective rate is 97.36%. Figures 1 and 2 show the questionnaire process used in this survey.

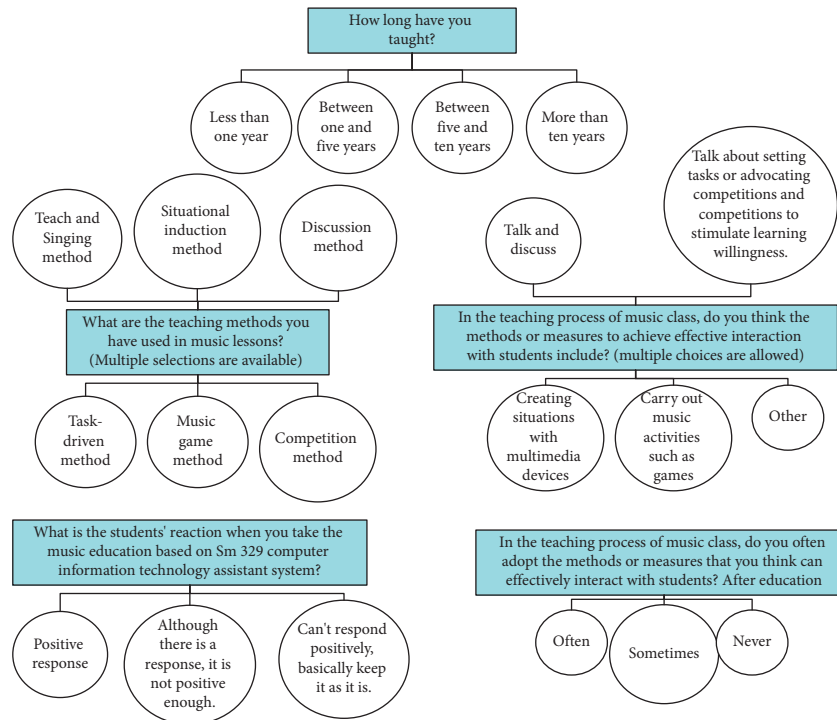


FIGURE 1: Teacher questionnaire distribution process.

3. Results and Discussion

3.1. *Teaching Situation after Teachers Use the Questionnaire.* Table 1 is obtained by analyzing the results of the question “In the teaching process of music class, what do you think are the methods or measures to achieve effective interaction with students?”

From Table 1, most teachers believe that the methods to achieve effective interaction with students are “talk and discuss” and “create situations with multimedia devices.” This shows that students and teachers are in high demand for portable players. In the improved teaching work, the computer information technology-assisted system proposed here is helpful to facilitate the teaching interaction. Teachers also agree with the way of teaching with the help of multimedia equipment.

3.2. *Teaching Situation after Students Use the Questionnaire.* Figure 3 is obtained after analyzing the results of the question “During the class, do you think the teacher interacts with the students frequently?”

From Figure 3, the situation of classroom interaction and communication has been significantly improved after the computer information technology-assisted system is added to the classroom. Most students believe that the frequency of interaction between teachers and students has increased. The students think that there is no interaction in the classroom that has reduced.

Table 2 indicates that most of the students are willing to try to interact with teachers after adopting the computer information technology-assisted system in classroom teaching. Classroom interaction is promoted.

3.3. *Discussion on Teacher-Student Interactive Creation Strategies in Music Teaching.* School music education is in the United States, Germany, Japan, the former Soviet Union, Hungary, and other countries. Dalcroze, Orff, Kabalevsky, and other schools have their characteristics [11]. School music education is a feature of the United States, Germany, Japan, and the former Soviet Union. Many teaching concepts, strategies, and methods are applicable to the teaching of music appreciation in junior high schools. Teaching practices in the Dalcroze music education system include postural rhythm, game pedagogy, sight-singing exercises, and improvisation [12]. Game pedagogy is important. When individual students are found to be slack, change them immediately. They are always in new condition. The purpose of postural rhythm is to train students to feel, understand, and express music effectively using sounds and movements. Momentum teaching is a unique teaching method in Orff’s teaching system. Copeland proposes three ways of music appreciation, namely, aesthetic feeling, expression, and pure music. He emphasizes the primacy of listening in music appreciation and its role in musical understanding. Bath et al. (2020) proposed the research value of music teaching strategies in junior high schools. The subject was emotion, appreciation, expression, creation, music, and related cultures. Music teaching practices in junior high schools, they argued, were an important aspect of basic education and a tool to apply aesthetic education. The teaching technique for junior high school music was conducive to growing students’ sentiment, inventive spirit, and practical competence. It could improve students’ cultural accomplishment, aesthetic ability, physical, and mental health. In addition, it could also promote the all-around development of students’ morality,

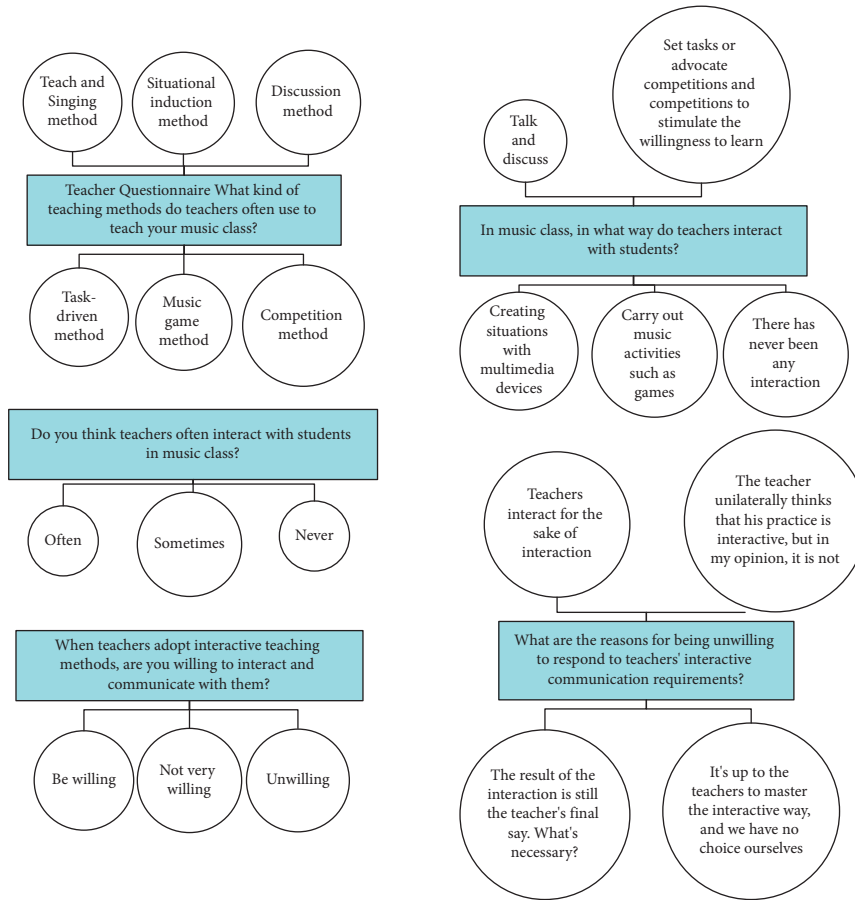


FIGURE 2: Student questionnaire distribution process.

TABLE 1: Statistical results of effective interactions with students.

Answer	Talk and discuss	Create situations with multimedia devices	Set tasks or advocate competitions and competitions to stimulate willingness to learn	Carry out music activities such as games	Other activities
Person-time	20	12	1	2	1
Percentage	100%	60%	5%	10%	5%

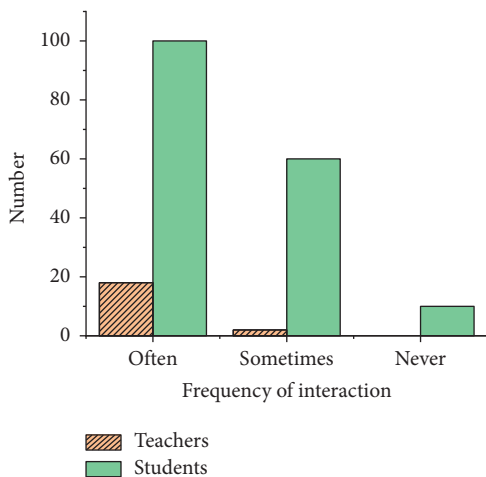


FIGURE 3: The interaction between teachers and students in the music class.

TABLE 2: Statistical results of students' willingness to interact and communicate with teachers.

Answer	Very willing	Willing	Unwilling
Person-time	120	40	21
Percentage	64.86%	21.62%	11.35%

intelligence, physique, and beauty [13]. Pérez-Moreno and Carrillo (2020) started with the problem of the declining status of music appreciation teaching, focusing on the analysis of students' unsustainability, disinterest, and lack of concentration [14]. Some teachers focus on skill development and ignore the status quo of appreciation teaching. Therefore, the importance of using teaching strategies in music appreciation teaching is discussed. Diversified music creates a good living environment for students. According to the different interests and characteristics of each student, a

targeted teaching method is selected to promote the efficiency of music appreciation teaching. Kim et al. (2019) compared the education systems of China, the United States, and Japan. They proposed that the use of postural rhythm strategies in music appreciation teaching could improve the teaching efficiency of music appreciation classes. A good self-preset of body rhythm was prepared. Listening to music and dance helped students discover patterns and master skills, thereby cultivating students' ability to create body rhythm and grasp the opportunity to properly use body rhythm [15].

The methods mentioned above require that teaching equipment must be portable and informative. It is found that there is no fixed and single teaching strategy in music appreciation teaching by sorting out the above-mentioned Chinese and foreign literature.

4. Conclusion

To summarize, the construction of a music teaching model based on a computer-assisted system can fully meet the needs of teacher-student interaction in music education. It is also an indispensable part of music teaching and the inherent need of building an ecological music classroom. The author investigates the interaction of music teaching in 10 junior high schools using the system. There are still many disadvantages to music teaching in junior high school. The interactive sessions are mainly initiated by teachers, and students are in a state of aphasia. The classroom democratic atmosphere that supports interactive teaching is weak. Because of the system described here, these drawbacks have been substantially mitigated. Changes in the selection of instructional challenges, the design of situational contact, and the strengthening of emotional interaction have been made for a long time. In the music teaching model based on the computer information technology-assisted system, the most fundamental requirement is that teachers should change traditional concepts. Teachers should change from the "main body" of teaching to the "leading" role of music teaching. Students should return to the "subject" position. According to the teaching strategy constructed here, teachers need to make full use of the information system and put themselves in the "dominant position of equal discussion." Teachers should also observe students' reactions to the interaction. It is necessary to proceed from the perspective of equality between teachers and students to effectively change the way of thinking of teaching interaction and form an "ecological" interactive music teaching model that teachers and students are willing to accept.

Data Availability

Data will be provided upon request from the authors.

Conflicts of Interest

The authors declare that they have no conflicts of interest concerning this study.

References

- [1] E. P. Asmus, "Motivation in music teaching and learning," *Visions of Research in Music Education*, vol. 16, no. 5, p. 31, 2021.
- [2] R. T. Sivarajah, N. E. Curci, E. M. Johnson, D. L. Lam, J. T. Lee, and M. L. Richardson, "A review of innovative teaching methods," *Academic Radiology*, vol. 26, no. 1, pp. 101–113, 2019.
- [3] D. Kalyani and K. Rajasekaran, "Innovative teaching and learning," *Journal of applied and advanced research*, vol. 3, no. 1, pp. S23–S25, 2018.
- [4] A. B. Samuel and M. M. Rahman, "Innovative teaching methods and entrepreneurship education: a review of literature," *Journal of Research in Business, Economics and Management*, vol. 10, no. 1, pp. 1807–1813, 2018.
- [5] J. H. Jo and T. S. Cho, "For professional music education A study on the need for practical music teacher certification," *Journal of the Korea Academia-Industrial cooperation Society*, vol. 22, no. 5, pp. 180–187, 2021.
- [6] S. Senthamarai, "Interactive teaching strategies," *Journal of Applied and Advanced Research*, vol. 3, no. 1, pp. S36–S38, 2018.
- [7] L. Orshanskyi, V. Krasnopolskiy, and I. Fednova, "Interactive teaching methods as a change in the purpose of modern education," *Systematic Reviews in Pharmacy*, vol. 11, no. 10, pp. 549–555, 2020.
- [8] Y. H. Yuan, C. H. Liu, and S. S. Kuang, "An innovative and interactive teaching model for cultivating talent's digital literacy in decision making, sustainability, and computational thinking," *Sustainability*, vol. 13, no. 9, p. 5117, 2021.
- [9] M. Will, J. Groeneveld, K. Frank, and B. Müller, "Combining social network analysis and agent-based modelling to explore dynamics of human interaction: a review," *Socio-Environmental Systems Modelling*, vol. 2, p. 16325, 2020.
- [10] R. Palaniyammal and P. Lakshmi Shanmugam, "Interactive teaching methods and learning style," *Journal of Applied and Advanced Research*, vol. 3, no. 1, pp. S7–S10, 2018.
- [11] H. Hashim, "Application of technology in the digital era education," *International Journal of Research in Chemistry and Environment*, vol. 1, no. 2, p. 1, 2018.
- [12] C. Y. Vitalyevna, "Interactive methods of teaching Russian literature in schools with Uzbek language learning," *Oriental Renaissance: Innovative, educational, natural and social sciences*, vol. 1, no. 4, pp. 1169–1174, 2021.
- [13] N. Bath, A. Daubney, D. Mackrill, and G. Spruce, "The declining place of music education in schools in England," *Children & Society*, vol. 34, no. 5, pp. 443–457, 2020.
- [14] J. Pérez-Moreno and C. Carrillo, "The impact of school music education: the experiences of four Catalan citizens," *International Journal of Music Education*, vol. 38, no. 1, pp. 113–125, 2020.
- [15] E. Kim, J. Zhang, and X. Sun, "Comparison of special education in the United States, Korea, and China," *International Journal of Special Education*, vol. 33, no. 4, pp. 796–814, 2019.