A study on the Application of Computer Music in Mass Music Tutoring

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Abstract. Computer music occupies an important place in the field of musical art, a highly expressive and creative genre that opens up a whole new path for innovation in music production. With the continuous improvement of people's living standard nowadays, more and more people begin to pay attention to the improvement of spiritual needs, and mass music culture is loved and recognized by people in this environment, and has been vigorously promoted. For the implementation of mass music tutoring, the application of computer music technology has an important role to play, not only to break the limitations of traditional culture, but also to enhance the musical ability and music literacy of the masses. This paper makes an in-depth study on this, firstly, it elaborates the concept of computer music, introduces the specific composition of computer music system, and finally discusses the application ways of computer music in the process of mass music tutoring with the actual situation.

1. Introduction:
With the continuous development of the Internet, electronic technology has been widely used in all walks of life, and the expression of music has also undergone obvious changes. In this environment, computer music was born, which has largely injected vitality into the creation and performance of music and the implementation of education, and also brought new vitality to the life and work of the social masses, which has not only enriched the amateur cultural life of the masses, but also promoted the good development of the music field, especially for musicians, the application of computer music can penetrate into all aspects of the accompaniment, appreciation and education of mass music. In particular, the application of computer music technology can effectively replace some other more expensive musical instruments in education and counseling, and also effectively reduce the investment of human labor resources, giving full play to the efficiency and overall quality of mass music counseling, which is of great practical significance in promoting the improvement of mass music ability and music literacy.

2. The concept of computer music
Computer music is based on Internet technology and refers to a specific type of music that is created and distributed online using computer music software, electronic instruments, etc. Not only is it a new form of musical art expression, but also a new tool for expressing music, which involves many kinds of computer technologies such as MIDI technology, digital audio technology, multimedia technology, etc. Through the editing and configuration of musical information such as notes and tracks, to create music
with perfect effect by using sound source MIDI effects, which provides more ways for music creators to learn and creates a wide space for their future creation [1].

3. Specific components of the computer music system
A computer music system is a special system for creating music, consisting of many hardware and software facilities, with a complicated internal structure. The hardware facilities include: MIDI keyboards, digital instruments, microphones, processing equipment, output devices, etc.; the software facilities include: sequencing software, audio editing software, computer scoring software, automatic accompaniment software, and some diverse online teaching software, etc. The details are mainly as follows.

3.1. Multimedia computer
Computer music system has the function of assisting music creation, however, to achieve this function, the process for the computer's hardware configuration puts forward high requirements, including CPU, hard disk, memory and other parameters to ensure a high configuration, requiring the use of "T-class" large hard disk, and to ensure that the internal memory of more than 1T, and to have enough memory to store the sound library, to provide favourable conditions for computer audio production sound card, memory to ensure that the 8G or more [2]. In general, music and cultural units must choose some multimedia computers with relatively high configuration in the process of computer music composition, so that they can better meet the actual needs.

3.2. Sound card
The main role of this device is used to handle the audio output of the computer music production process, while playing the role of the synthesizer function, for different units in the process of making music also need to combine the actual environment to choose a different sound card configuration. In the process of implementing mass music tutoring, only the common low-end sound cards in the market can meet the basic needs of computer music production, and more complete functions, such as the SW 100XC sound card can get good results, which has 32 MIDI channels and 64 polyphony, including 46 sets of percussion groups, can play a good effect in the process of tutoring mass music.

3.3. Sound source and MIDI keyboard
For music production, the sound source plays an important role and is one of the key devices, mainly using external incoming signals to control the vocal state. For mass music culture, folk instrumental music occupies an important place and is the main vocal device, so computer music composition can then choose domestic folk music for tutoring work, where the MIDI keyboard is the core equipment of the MIDI technology system, which assumes the role of sending signals.

3.4. Audio sequencing software
The sequencing software is also an important part of the computer music system, the application of this software is mainly through the MIDI keyboard to record notes, rhythms and other musical information, and digitization, so as to finally make it form a complete music file. On the other hand, sequencing software also plays a supportive role in the execution of compositions, allowing the use of graphics to present the score, which is then subsequently edited and processed to make a complete music for the best artistic effect.

3.5. Cakewalk Software
Cakewal in MIDI production sequencer software belongs to a very common kind, and very representative, after continuous development and improvement, Cakewalk software has been upgraded and progressed many times, not only the functions have increased, the advantages have also increased, now the Cakewalk software has been able to set MIDI audio and audio sources, etc. as a whole, providing a good performance platform for music creators. The application of such software in the creation of
music culture in the group not only reduces the difficulty of music creation, but also develops the motivation and initiative and self-confidence of the creator to a certain extent.

3.6. Audio Editing Software
Audio editing software, as the name suggests, is a software mainly used to edit and process audio, including recording processing, mixing processing, and post-processing of audio. Cool EditPro is more common in audio editing software, which has a small capacity, clean and tidy interface, and is easy to operate with less costly investment for audio recording, recording processing, format conversion, editing profiles and other operations. This software has worked well and to advantage in some smaller scale mass music tutoring.

3.7. Computer spectrum making software
The role of computer spectrum making software in the computer music system can not be ignored, compared to audio editing software and sequencing software is more focused and targeted, the main highlight is the score printing and editing functions. Computerized sheet music software can usually be divided into several different types such as stave computer spectrum software, tablature computer spectrum software, and numbered musical notation computer spectrum software. Since folk instruments occupy an important place in our mass music culture and have a profound influence, the composition of mass music usually adopts the simple notation method, so it is also necessary to choose the simple computer notation software to tutor the composition of mass music with the actual needs.

3.8. Automatic accompaniment software
Automatic accompaniment software mainly plays the role of auxiliary accompaniment, and the application of such software can simplify the editing function of the music system accordingly, transforming it into a harmonic function, and then selecting the corresponding accompaniment style to finally create the perfect accompaniment track. Therefore, this software plays an important role in mass music tutoring, not only is it easy to operate, but it is also highly effective. After entering the melodic voices of the piece, you can directly fill in the appropriate harmony functions and finally generate the music file and save it. Therefore, it is also more widely used in the current field of music composition.

4. Ways of applying computer music in mass music tutoring
Mass music involves many aspects, including music performance, composition, orchestration, music appreciation, etc. Therefore, in order to better implement mass music counseling, the relevant personnel must start from various aspects and apply computer music flexibly, so as to better promote the development and progress of mass music in China.

4.1. The use of computer music in electronic piano tutoring
With regard to the tutorial teaching of the electronic piano in mass music, teachers should also pay attention to the choice of modern computer tools and flexibly apply MIDI libraries combined with demonstrations of sheet music performance to tutor and explain. During the whole process, the teacher can first demonstrate the performance and then organize the students to imitate and practice. In addition, the teacher can also apply the Calkwalk software and select the repetition practice function in it to organize the students to practice playing repeatedly and provide more opportunities for the students to play the electronic piano, so as to strengthen the students' playing skills and performance level. What needs to be noted in this process is that the teacher can show each student's electronic piano performance through projection to help them clarify their learning status and their learning problems, and then carry out targeted practice and consolidation with the actual situation, so as to better improve the quality of students' learning [3].
4.2. Computer music in composition tutoring
For the implementation of mass music tutoring, composition tutoring occupies an important place in it and is an important component that cannot be ignored and must be given high attention in the application of computer music tutoring. Computer music systems have many different kinds of composing software that involve musical resources about timbre, rhythm, form, and many other aspects, for which teachers must be flexible in the process of mass music tutoring. On the whole, in the process of implementing mass music tutoring, teachers can appropriately use software such as Cuhase and Sonar to display the scores in real time through the recording function and MIDI keyboard playing function available in them, and then organize the participants to analyze the rhythmic and melodic and harmonic elements of the scores in depth, and carefully find and summarize the errors and problems in them, and then actively correct them. Through such good demonstrations and careful use of composition software, the composing skills of mass participants can be effectively improved.

4.3. Computer music in orchestration tutoring
In the past, orchestration was taught mainly through live performances, which required a lot of time, effort and cost in order to verify the state of coordination and ensemble effect between the individual instruments. In this regard, teachers can then use computer music to assist in teaching by constructing a sound library through the music production software in the computer music system, then inputting and manipulating various instruments and organizing learners to listen carefully to the effects of playing different instruments. The teacher should also guide the students to experiment and create boldly during the process, promote the connection between theory and practice, do a good job of demonstrating the operation, and encourage the students to participate in the process, so that they can deeply feel the effect of the ensemble between the instruments and really know how to apply and match the instruments correctly.

4.4. The use of computer music in music appreciation tutoring
In order to improve the overall music literacy of the masses, it is necessary to cultivate their music appreciation ability, and only by improving the level of mass appreciation can the masses be motivated to actively participate in music learning and appreciation, so that they can learn more music knowledge in the process of enjoying music. Traditional music appreciation counselling is unable to change and optimize the disadvantages of playing music on audio cassettes, so traditional music appreciation counselling can no longer meet the needs of the current stage of music development. Therefore, in modern mass music tutoring, tutors must take the initiative to apply computer music systems to improve the original music appreciation teaching models and methods [4]. The computerized music system is actively used in the actual teaching to play the popular music repertoire, thus strengthening the music appreciation level of the students based on the improvement of their music skills. The flexible application of computer music software allows for a comprehensive analysis and study of relatively complex music and musical compositions, enabling learners to appreciate and listen to music more clearly and to better grasp and understand the emotions that the music is intended to convey. In addition, as tutors at this stage, they should actively use the various functions in the computer music system so that the musical works can be expressed more graphically and vividly, which is very important to improve the musical taste of the masses.

5. Conclusion
In a word, technology is developing rapidly nowadays and for mass music tutoring, the use of computer music plays an important role. In this regard, teachers in the relevant fields should pay great attention to this, combined with the actual situation to choose targeted counselling means, the process of flexible application of computer music, in order to improve the efficiency of mass music counselling based on enhancing the masses of music composition and performance skills, which also has important practical significance for promoting the development of China's mass music culture.
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