

The Combination of Piano Teaching and Modern Digital Technology

Lijun Yang

School of Music, Shanxi University, Taiyuan, Shanxi 030006

Abstract: With the development of national economic situation, the level of science and technology progress, multimedia and network technology began to be widely used in the field of education and teaching. When it comes to piano teaching, the further integration of science and technology undoubtedly provides an opportunity for the development of teachers' teaching, and also improves the efficiency of teachers' teaching. Modern digital technology is a science and technology that accompanies electronic computers. At present, under the new situation, modern piano teaching is in a new stage. The integration of modern electronic technology and modern piano teaching, the organic integration of solfeggio and piano teaching, pay attention to the simultaneous teaching of piano teaching and live performance and the teaching of piano ensemble. The use of digital modern technology in piano teaching can break the disadvantages of traditional teaching mode and bring new opportunities for piano teaching and research.

Keywords: Piano teaching; Modern digital technology; Teaching effect

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Modern digital technology and computer together, in the current information society, digital technology has been deeply into people's daily life and learning aspects. The integration of modern digital technology and piano has brought a huge revolution in the music industry. The combination of piano teaching and modern digital technology is a transformation of music teaching, music creation, music production, music performance, etc., and is the highest realm of human control and "play" of music. The use of digital information technology in piano teaching will inevitably break through the previous teaching mode, make piano teaching from monotonous to colorful, from abstract to concrete, so as to achieve unprecedented results, and open up a new world for piano teaching and research.

1. Integrate solfeggio and piano teaching organically

On the basis of obtaining a piano piece, it is necessary to quickly analyze its rhythm group, mode and tonality; integrate the staff sound into the piano education, use the brain, combine attention, memory and thinking ability, actively mobilize the visual and auditory nerves, and transform the staff sound and music into fingertip music. High-level students can get a piano piece, that is, they can play it while reading the score. This situation is called "visual performance" ^[1]. The training and cultivation of visual playing skills is of great significance to improve students 'playing level. Students with good piano playing skills have performed well in the process of learning solfeggio courses, especially in listening to the level and duration of sound discrimination, listening to the color of intervals, chords, and singing songs. Therefore, in music education, sight singing practice and playing practice are mutually reinforcing. In teaching practice, the digital piano teaching classroom makes full use of digital technology. By using the devices in the

computer music system, the MIDI piano works library is constructed, so that students can learn and understand different piano works in their limited learning time, broaden students' musical horizons by expanding their own reserves, and improve students' musical literacy and performance ability.

For example, it is an effective method to apply multimedia technology such as Auralia to the teaching of piano music lessons. Auralia software is a kind of solfeggio software developed by RisingSoftware company. Through this software, you can sing intervals, chords, scales, and melodies into the microphone, and then judge by the program. Each chapter of the software has a description of the principles, with examples of acoustic materials and spectra. Its use is direct, clear, simple and convenient. There are level tests in software operations, whether it is a level test or a level test. The computer will score and record each test for students, so that students can master the progress of the examination. Many of the characteristics of the system can be set by themselves, can be adjusted according to the actual needs, can also be applied in other music classes, but also can be adjusted according to the learning situation of the students. Therefore, the piano music tunes into the Auralia software system, so that students can train, which is of great help to improve students' reading and sight singing ability, and finally achieve the purpose of piano teaching method and step by step.

2. Synchronization Teaching of Piano Teaching and Live Performance

In the teaching of music major, "improvisation" is an important teaching content. The purpose of this course is to give students a preliminary understanding of the general rules of song arrangement of different genres and styles, and to train students in their rapid arrangement and playing ability, creative ability and overall response ability, so as to improve their musical performance ability in performance. Students should take playing good accompaniment as the primary goal, have the skills to play accompaniment, be able to act as solo, group and chorus accompaniment in music courses, and act as various accompaniment in various artistic performances in schools and schools. The integration of "improvisation" teaching and piano teaching, the enrichment of teaching content, the science of teaching methods, and the modernization of teaching methods will not only enable students to skillfully use basic performance techniques, but also enable them to skillfully use "harmony" and "timbre. It can be seen that the combination of playing and singing in piano lessons is a practical method ^[2].

For example, you can use computer music software to teach improvisation. In order to make the basic scientific problems such as musical structure, harmony layout, accompaniment texture, playing technology and other basic scientific problems involved in the teaching of impromptu accompaniment, as well as the operation in practice, the digital piano classroom and computer music software are used in the classroom to enhance the communication between teachers and students, mobilize the students' enthusiasm for learning, and finally achieve better teaching results. Encore is a special staff preparation program developed by PassportDesigns Corporation of the United States, which has the advantages of spectral surface specification, powerful function and high degree of intelligence, and is easy for users to use. The system can not only produce various types of staff, but also can be used as an audio-visual display tool for music. In the explanation of accompaniment and harmony structure, through Encore's music display function, music and music can be presented to students together, and rhythm and harmony arrangement training can also be carried out.

3. The Teaching of Piano Ensemble

Piano ensemble has four hands, two piano ensemble, piano ensemble and many other forms. This way of playing has been widely used in the field of playing, and has been explored and tried in the piano lessons of teachers. In the piano ensemble class, the difficulty of playing cooperation lies in the cooperation of the choir. This teaching method will make students waste a lot of time to repeat and make students feel more boring. If the recording ability of Nuendo3 software is applied to the classroom, the training cost will be greatly reduced and the listening and playing quality of the musicians will be improved. In the ensemble, the performance of the bass part and the treble part is recorded. When sampling, it can be sampled, recorded and edited according to the teacher's performance. After the recording, the recording was given to the students of the high and low voices for accompaniment. In the practice of music, you can use the method of paragraph, phrase, focus and difficulty. You can also use a method that can reduce the sound rate in the Nuendo3 software to train. This auxiliary method can effectively avoid the training time of each vocal musician, so as to achieve the training effect, stimulate the enthusiasm of the students, and reduce the teacher's guidance to the student training ^[3].

For example, when teaching American composer Gershwin's "Prelude First", according to the beats and tones of American folk songs such as blues and Charleston, the two pianos were recorded separately in actual education and teaching. When teaching, teachers should first create a sound file, set the sampling frequency of the sound to 44.100 kHz to 192.000 kHz, the sampling accuracy

to 24 bits, and the sound quality to WaveFile. Then recreate the recording track and select the recording. Next, in the recording session, you can set automatic recording according to specific conditions. Since students may have short pauses, errors, discontinuations, etc. when playing live, some substitutions need to be made in the recorded places. For example, you can add special effects or balance when recording, but if you add special effects recording, you will not be able to change the original sound. Then there is the sound splicing process. Some sounds with repeated records or errors can be cut off, and then all the sounds can be edited together to form a sound. You can also use fade-in and fade-out functions to adjust the volume of the clipped and synthesized sound, and sample the reverberation to achieve a true expression of the sound.

Conclusion

In short, in today's world of high-tech and digital background, piano teaching in teaching content, teaching methods, teaching methods, teaching forms and other aspects have undergone tremendous changes, piano teaching is also moving towards a broader field of development. Each school should be based on the actual situation, give full play to the ability of teaching innovators to try, open up a new world of music education, make continuous progress in continuous exploration, and cultivate more talents in continuous practice, so as to make unremitting efforts to cultivate a kind of applied and compound talents who can integrate music and education.

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About the author:

Lijun Yang (1979-); Gender: female; Nationality: Han; Highest educational background: master's degree; Title: lecturer; Research Direction: Piano Performance and Teaching Theory Research