

Research on the Application of Multimedia Technology in Music Teaching

Junxian Hu

College of Music and Dance, Jining Normal University, Ulanqab, 012000, Inner Mongolia, China

ABSTRACT

With the vigorous development of science and technology, multimedia technology has penetrated into all aspects of education. In music teaching, multimedia technology has become a new key to open the door to music, which breaks through the shackles of traditional teaching, injects more vitality into music education, and makes music teaching glow with unprecedented charm. It is helpful for students to master music knowledge and skills, and to develop the perception, imagination, intuition and thinking abilities. Based on the application value of multimedia technology in music teaching, this paper discusses the shortcomings in music teaching and the path of applying multimedia technology in music teaching, in order to provide beneficial reference for music teaching in colleges and universities.

KEYWORDS

multimedia technology; music teaching; application

The rapid development of multimedia technology has brought unprecedented opportunities for music teaching, which breaks through the limitations of traditional teaching methods and provides more abundant means for the interaction and emotional resonance between teachers and students. In the teaching process, multimedia technology can provide vivid pictures, realistic sound effects and dynamic video presentation to enhance students' sensory experiences, stimulate their learning interest and improve their learning effect. At the same time, multimedia technology also has the advantage of spanning time and space, which enables students to obtain high-quality music resources anytime and anywhere and achieve the personalized learning. In the field of music analysis and creation, the intervention of multimedia technology provides students with more intuitive data analysis tools and creative expression platforms, and greatly expands the depth and breadth of teaching. In short, the application of multimedia technology makes music teaching further develop towards a more intelligent, scientific and efficient direction.

1 The Value of Applying Multimedia Technology to Music Teaching

1.1 Give Full Play to Students' Subjective Initiative

In music teaching, the application of multimedia technology can effectively stimulate students' learning interest and promote the expression of students' subjective initiative. The music teaching based on teachers' explanation and students' passive acceptance is not conducive to mobilizing students' enthusiasm, but through multimedia technology, teachers can use video, audio, images and other diversified means to present vivid and intuitive music content for students. For example, teachers can play live concerts to make students feel the musical expression more intuitively and enhance the sense of immersion. At the same time, multimedia technology provides personalized learning conditions for students. Students can watch the teaching content repeatedly through courseware and adjust the learning progress at any time, so as to master the knowledge points more actively and cultivate the independent learning ability and innovative thinking.

1.2 Improve the Quality of Music Teaching

The introduction of multimedia technology provides more possibilities for music teaching, and is helpful for teachers to present the course content more comprehensively and improve the efficiency of classroom teaching. By using multimedia technology, teachers can integrate complex music theory, historical background and practical skills to concretize and visualize abstract content, which is conducive to improving teaching efficiency. For example, when explaining the harmonic structure of music, teachers can dynamically display the arrangement of notes and their auditory effects through software, to make students more intuitively understand the theoretical knowledge and expand the depth and breadth of teaching. In previous classes, teachers are limited by textbooks and time and cannot conduct in-depth teaching. However, the introduction of multimedia technology helps teachers to obtain a large number of external resources, such as music works from all over the world and performance videos of famous artists, so as to enrich classroom content and improve teaching quality.

1.3 Enrich Music Education and Teaching Resources

Multimedia technology provides support for the expansion of music teaching resources. Multimedia resources have the characteristics of richness, interaction and fast update. Teachers can obtain music materials from all over the world through the Internet, and provide students with more diversified learning materials. Multimedia technology also supports the independent production of resources. Teachers can design courseware, record teaching videos, and even develop virtual instrument demonstrations based on their teaching needs. At the same time, the diversity of multimedia resources can meet the needs of different students. Students who prefer practice can use multimedia to simulate performances. Students with strong interest in theory can use multimedia to study music analysis in depth. In short, the application of multimedia technology in teaching has created a broad space for music education.

2 The Shortcomings of Music Teaching

2.1 Teaching Resources are Relatively Simple and not Closely Combined with the Times

In music teaching, the limitation of teaching resources is a common problem. On the one hand, most of textbooks and materials used in music courses in many schools remain in a fixed repertoire and a single form, which lack diversified materials and modern expanded content. The current situation of single resources makes it difficult for students to feel the richness and freshness of music, and limits students' in-depth understanding of music culture^[1]. On the other hand, music teaching resources are not closely combined with the times and are not integrated with modern popular culture or interdisciplinary knowledge. At present, the wide application of digital music, streaming media and multimedia art has profoundly changed the way people experience music, but music teaching fails to make full use of these technical means, and still sticks to note teaching and a single audio-visual way. It not only cannot fully show the diverse charm of traditional music, but also makes students have a sense of distance from music.

2.2 Teaching Methods Need to be Innovated, and Cannot Stimulate Students' Interest in Learning

In music teaching, the backwardness of teaching methods is another problem to be solved urgently. In the music class, the "teacher talk only" teaching mode emphasizes students' mechanical imitation of musical scores and techniques, but lacks the discussion of the cultural background, historical connotation and emotional expression of the music, which is insufficient in interaction and interest, and cannot stimulate students' enthusiasm for learning^[2]. Moreover, traditional music teaching does not pay attention to the cultivation of students' individual interests and creativity. Students' music interests and learning needs are different, but most classrooms pay attention to unified teaching progress and examination standards, and cannot teach students according to their aptitude. For example, for students who love modern music, it may be easier to arouse their interest to introduce more contemporary arrangement elements into traditional music, or compare traditional music with popular music. But in reality, such attempts are still rare, which causes students to lack active participation awareness in traditional music. In addition, many courses pay too much attention to the "correctness" of the technical level, but ignore students understanding and expression of inner feelings and thoughts in music, which further weakens the attraction and appeal of teaching.

2.3 There is a Lack of Technology Application, Social Practice and Innovation in Teaching

In the current era of rapid development of information technology, the application of science and technology has penetrated into various fields of education, but the application of science and technology in traditional music teaching is still insufficient, and some schools have not made full use of modern teaching tools, such as virtual reality (VR), augmented reality (AR), artificial intelligence (AI) and other emerging technologies to help students feel the charm and cultural connotation of traditional music more directly. In addition, the current music teaching mostly stays at the theoretical level, and students rarely have opportunities to participate in actual folk activities or music performances, which makes their cognition of traditional music culture relatively shallow. The lack of innovation in traditional music teaching is also a prominent problem. In classroom teaching, teachers rarely guide students to adapt and re-create traditional music, which limits students' modern interpretation and innovative practice of traditional music.

3 Innovative Path of Multimedia Technology Application in Music Teaching

3.1 Keep up with the Pace of the Times and Expand Teaching Resources

In music teaching, the application of multimedia technology provides an opportunity for resource expansion. For

example, by using cloud platforms and network technology, teachers can quickly access and download all kinds of music works, including classic songs, audio records of intangible cultural heritages, modern electronic music, etc., in order to break the restriction of traditional resources and provide students with rich learning resources. Then, teachers can use online music databases and streaming media platforms to play and analyze music works of different styles, schools and periods in class, and display relevant cultural background and creation history in combination with video materials to help students understand the sound characteristics of different instruments more intuitively. In addition, the rise of we-media and social media platforms has provided teachers with more teaching materials. To this end, colleges and universities can actively cooperate with music bloggers and creators, so that students can enjoy original music works and learn the basic skills of making music, and the teaching content can be richer and closer to the times.

3.2 Innovate Teaching Methods and Stimulate Learning Drive

The application of multimedia technology changes music teaching from one-way infusion to multi-dimensional experience combining interaction and participation. First, it can conduct the flipped classroom teaching. Teachers can pre-record teaching videos and complete the theoretical knowledge teaching before class, and then the class time is used for interaction and practice. With the help of video analysis tools, students can repeatedly watch the teacher's performance demonstration and learn from the details, thus improving their self-reflection ability. Secondly, multimedia technology can be used to design music games to stimulate students' learning motivation. Teachers can guide students to master music theory knowledge and performance skills in gamification scenes through music games such as Rhythm Master, Hot Dance Party. These games usually contain task, reward and challenge mechanisms, which can make the learning process full of fun and a sense of achievement, and help students to consolidate knowledge and improve skills unconsciously. In addition, teachers can also use media technology platforms such as Mentimeter and Kahoot to collect students' evaluation and understanding of music works in real time, thus helping students form profound musical thinking in the process of expression^[3].

3.3 Integrate Scientific and Technological Means and Promote Practical Innovation

The core of music learning lies in practice, and the application of media technology provides students with diversified practice opportunities and innovation space. Teachers can guide students to use digital audio workstations such as Pro Tools to create and arrange music in a digital environment. These tools provide a complete music production process, so that students can actually participate in the entire creative process from note input, timbre design to mixing processing, to accumulate music production experience and cultivate creative and practical abilities^[4]. At the same time, online live streaming platforms and recording and playing technology also give students more opportunities to show themselves. For example, students can show live music performances through live streaming platforms to share their creations with a global audience. Finally, musical instrument digital interface (MIDI) technology provides technical support for improving the interactivity of music teaching. In class, teachers can use the MIDI keyboard for real-time performances, and display note changes through the projection, so that students can more clearly grasp the theoretical knowledge of chords, rhythms, etc. After class, students can use MIDI equipment to create music fragments, and share and communicate with classmates in real time, so as to improve their learning efficiency.

4 Conclusion

In short, the application of media technology in music teaching can not only enrich teaching resources and innovate teaching methods, but also provide students with rich practical opportunities. In this process, teachers need to make reasonable use of media technology to achieve the multi-dimensional goal of music education to bring unprecedented vitality and innovation to music teaching, thus providing infinite possibilities for students to enter the music world.

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