

# Exploration of the Application of Multimedia and Network Technology in College Vocal Music Teaching

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**ABSTRACT.** As the computer network technology develops continuously, college vocal music teaching also needs to make corresponding innovations in teaching model and teaching methods. When combined with multimedia and network technology, college vocal music teaching can transform the traditional listening and singing teaching model into a modern teaching model that combines audio, video and animation, which can encourage students to have a deeper understanding of ABSTRACT. vocal music knowledge.

**KEYWORDS:** Colleges and universities, Vocal music teaching, Multimedia, Network technology, Application

## 1. Introduction

Multimedia and network technology are the products of the fast-developing modern science and technology, and they have been widely promoted in various fields. Modern network technology can collect all global data and truly realize high-speed information sharing. In this context, the education sector also needs to pay full attention to the application of network science and technology, and actively apply multimedia and network technology to college teaching, which will significantly improve teaching effect. The following is the author's analysis of the application of multimedia and network technology in college vocal music teaching.

## 2. The Shortcomings of Traditional Teaching Model in College Vocal Music Teaching

There are certain limitations and drawbacks in the traditional teaching model of college vocal music teaching. The first is, under the traditional teaching model, tapes and disks are the most common teaching tools, but it may cause excessive reliance on single teaching tools, and make it difficult for students to accept new things. In the long run, students' creativity and comprehension will be damaged. Secondly, in recent years, with the increasing enrollment of vocal students and limited number of teachers, it is hard to take care of every student and not conducive to improving the overall teaching effect. Thirdly, the types of accompaniment instruments in vocal music teaching are relatively limited, which makes it difficult to create a musical atmosphere for students <sup>[1]</sup>.

## 3. Necessary Conditions for Effective Application of Multimedia and Network Technology in College Vocal Music Teaching

### 3.1 Hardware Guarantee

It is very important to improve the hardware facilities for the effective use of multimedia and network technology in college vocal music teaching. Colleges and universities need to configure high-performance computers and ensure that there are sufficient hard disks, memory capacity, high-quality monitors and graphics cards. In addition, to carry out vocal music teaching, colleges and universities also need to configure digital cameras, scanners, compression equipment and video capture equipment. The Video capture equipment is mainly to receive the dynamic video signals, and conduct dynamic video signal and digital signal conversion, video capture equipment and camera can work simultaneously to do digital input of the converted signals to the computer. The main role of a sound card is to enable the output of audio information from multimedia to sound output devices and sound equipment, and allow the input of external audio signals to the computer, as well as capture and compress audio signals with the assistance of computer. The main function of the scanner is to convert text and pictures into digital signals and input them to the computer. After entering into the computer, the digital signals that can be further processed through relevant software. The sound equipment and headphones enable students to enjoy high quality music. Therefore, upgrading of the above hardware facilities can

promote the effective application of multimedia and network technology in college vocal music teaching.

### ***3.2 Software Guarantee***

Apart from perfect hardware equipment, software is also indispensable. Multimedia includes a lot of software systems, such as compressing and extracting software, audio-video synchronization software and communication software. In addition to the above-mentioned software, multimedia preparation tools, multimedia authoring tools are also indispensable in a multimedia system. The multimedia preparation tools can collect, organize and produce materials. Multimedia authoring tools can collect multimedia data together to construct powerful multimedia system tools, such as Flash, PowerPoint and so on. Good software guarantee can provide convenience for the effective application of multimedia and network technology in college vocal music teaching.

### ***3.3 Personnel Guarantee***

When carrying out teaching tasks by means of multimedia and network technology in college vocal music teaching, professional training of teachers and relevant personnel should be undertaken to ensure that vocal music teachers can be proficient in using multimedia equipment and relevant teaching software, and have a certain understanding of computer network knowledge. Only in this way can the teaching advantages of multimedia and network technology be fully reflected, and teaching effect can be further improved<sup>[2-3]</sup>.

## **4. The Application Effect of Multimedia and Network Technology in College Vocal Music Teaching**

### ***4.1 Driving the Reform of the College Vocal Music Teaching Model***

Vocal music teaching differs significantly from traditional teaching, it requires students to totally understand singing skills, how to open up the voice and use their own vocal organs scientifically. Based on these skills, students are guided to evaluate their own performance on stage. Lack of these skills will directly weaken the effect of vocal learning. Although a more scientific and perfect teaching system has been built, there are still some uncertainties in the teaching system. Symbolic language will make it hard for students to understand vocal knowledge. While the application of multimedia and network technology can make the abstract vocal concepts more vivid, and promote students to have more clear perception and understanding of singing skills. For example, teachers can use Cool Edit Pro – a kind of computer music software to visualize invisible sounds so as to make vocal music learning less difficult for students. Another example is that teachers can use multimedia and network technologies to make three-dimensional animation that shows breath flow and movement of relevant muscles in the singing process, which can help teachers teach singing skills more easily and clearly. For teaching difficulties, with the help of the computer technology, they can be focused on and put more efforts on. Therefore, with the assistance of multimedia and network technology, the transformation between dynamic and static teaching content as well as the transformation between the abstract and the specific can be realized, teaching difficulties can be reduced, and the reform of college vocal music teaching model can be promoted.

### ***4.2 Improving the Teaching Effect of Vocal Music Teaching***

Singing performance is an indispensable part of college vocal music teaching. Under the traditional teaching model, subject position of students is not clearly reflected, teachers authority have been overly concerned. While with the continuous development and innovation of teaching ideas, there are more and more voices for students' subject position in the class. The active application of multimedia and network technology in college vocal music teaching can help set up good teaching context, when immersing in corresponding teaching contexts, students' subject position can be highlighted. According to relevant researches, a good teaching context can broaden students' thinking, which is of great significance for improving teaching effect. Therefore, according to actual teaching needs, college vocal teachers can use the combined multimedia and network technology to set up corresponding teaching contexts, prompt students with different learning ability to participate in class, and raise their interests in vocal learning. Please note that, when setting up teaching contexts for students, vocal teachers can freely use high-speed camera and X-ray photography, so that students can better develop their own music imagination and thinking and improve learning efficiency with the unique teaching methods<sup>[4-5]</sup>.

### ***4.3 Improving Students' Performance***

Stage performance is a very important teaching content in vocal music teaching. Students can show their singing

skills on the stage, which helps enhance self-confidence. In vocal music teaching, singing skills teaching is systematic and scientific. However, generally speaking, the teaching effect of singing performance is not very satisfying. In the past, singing performance teaching usually adopted the traditional way of stage performance. However, with the continuous development of modern information technology, the singing performance in vocal music teaching can be assisted by multimedia and network technology. With the help of modern information technology, students can complete a performance in better shape, which plays an important role in strengthening students' emotional cultivation. Vocal music teachers can simulate the situation of stage performance for students with the help of video recording and accompaniment functions of multimedia, and record the performance of students with camera throughout the whole process. So students can watch the video afterwards, and evaluate their performance, find out the shortcomings, make improvements, and gradually achieve the best performance state.

#### **4.4 Promoting Teaching Resources Sharing**

Actively applying multimedia and network technology to college vocal music teaching can break the time and space limitations of traditional teaching model. Vocal teachers from different places can use the network to communicate and interact with students, and the sharing of teaching resources can be truly realized. Multimedia and network technology can concentrate the vocal teachers' wisdom and teaching skills on the network platform, encourage teachers to share their own teaching experience with each other, and learn from each other to improve their own teaching level<sup>[6]</sup>.

#### **4.5 Relieving the Burden of Vocal Teachers**

The effective use of multimedia and network technology in college vocal music teaching can significantly relieve the teaching burden. When vocal teachers can proficiently use multimedia and network in class, a lot of time that spent to repeat knowledge will be saved. There will be more time for students to practice independently, and class teaching efficiency will also be improved<sup>[7-8]</sup>.

### **5. Conclusion**

In summary, the active application of multimedia and network technology in college vocal music teaching can significantly improve teaching efficiency, and is also of great significance for promoting the modernization of higher education. Moreover, the active application of multimedia and network technology in college vocal music teaching requires sound hardware guarantee, software guarantee, and personnel guarantee. After sufficient teaching conditions are prepared, vocal music teaching effect can be dramatically improved in carrying out teaching tasks. That's all for the application of multimedia and network technology in college vocal music teaching in this article, which hopes to further improve the vocal music teaching effect.

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