

Application and Effect Analysis of Multimedia Technology in Vocal Music Teaching

Guowei Li

Xinxiang University, Xinxiang, Henan, China

Abstract: This paper analyzes the specific application of multimedia technology in the introduction of vocal music course, skill demonstration and guidance, work analysis, etc., and takes the vocal music course of a music college as an example, and shows how multimedia technology promotes the overall development of students, including the improvement of creativity, critical thinking and independent learning ability. By comparing the data before and after the introduction of multimedia technology, the paper confirms the remarkable effect of multimedia technology in improving teaching efficiency, stimulating learning interest and promoting students all-round development.

Key words: Multimedia Technology; Vocal Music Teaching; Teaching Efficiency; Student Development

1. Introduction

Vocal music teaching is an important part of music education, which not only requires students to master the correct vocal skills, but also needs to cultivate students music perception ability and expression. Traditional vocal music teaching mainly depends on teachers demonstration and students imitation. Although this teaching method is effective, it has some limitations, such as the limitations of teaching resources and the simplicity of teaching means. With the continuous development of multimedia technology, its application in vocal music teaching provides the possibility to solve these problems.

2. The Concrete Application of Multimedia Technology in Vocal Music Teaching

2.1 Application of Multimedia Technology in the Introduction of Vocal Music Courses

The application of multimedia technology in the introduction of vocal music course is an

important embodiment of the innovation of modern educational technology. It greatly enriches the content and form of vocal music teaching through various sensory stimuli such as visual and auditory stimulation. In the traditional vocal music teaching, teachers usually rely on oral explanation and demonstration, and the introduction of multimedia technology makes the teaching become more vivid and intuitive. The following is the specific application case analysis of multimedia technology in the introduction of vocal music course. Multimedia technology can provide rich audio-visual materials to help students to better understand and master the basic knowledge of vocal music. For example, when explaining the vocal principle of vocal music, teachers can use animated videos to show the vibration process of the vocal cords, so that students can intuitively see how the sound is generated. This visual teaching method is more intuitive than the simple oral explanation, and helps students to form accurate physical concepts.

2.2 Application of Multimedia Technology in Vocal Skills Demonstration and Guidance

The application of multimedia technology in the demonstration and guidance of vocal music skills has brought about revolutionary changes to the vocal music teaching. By visualizing abstract vocal skills, enabling students to understand and master these skills more intuitively. The application of multimedia technology is not limited to traditional audio and video materials, but also includes animation, virtual reality (VR), augmented reality (AR) and other technical means. The comprehensive application of these technologies has greatly improved the quality and efficiency of vocal music teaching. In the traditional vocal music teaching, teachers often need to teach students how to control breathing, sound position, resonance and other skills through oral guidance and personal

demonstration. However, this teaching method has some limitations, because students understanding and imitation abilities vary, and teachers demonstration may not fully meet the needs of all students. The introduction of multimedia technology enables teachers to use various audio-visual materials to assist teaching.

2.3 Application of Multimedia Technology in the Analysis of Vocal Music Works

The application of multimedia technology in the analysis of vocal works provides a new perspective and tools for understanding and appreciating vocal works. By integrating audio, video, text and images, multimedia technology not only enhances the depth and breadth of work analysis, but also enhances the

interactivity and interest of teaching. The application of this technology makes the analysis of vocal music works no longer limited to text description and oral explanation, but can let students further understand the structure, style, emotional expression and other aspects of the works through intuitive audio-visual materials. In the traditional analysis of vocal music works, teachers usually rely on the music score and oral explanation to analyze the melody, harmony, rhythm and other musical elements of the work.

3. Analysis of the Effect of Multimedia Technology in Vocal Music Teaching

3.1 Improve Teaching Efficiency

Table 1. Comparison of the Average Time of Students Mastering Vocal Music Skills Before and After the Introduction of Multimedia Technology

content of courses	Before introducing multimedia technology (minutes)	After the introduction of multimedia technology (minutes)	Increase the percentage
Breathing skills	43.5	28.2	35.1%
Sound position	48.7	33.4	31.5%
Resonance control	59.3	39.8	32.9%

The application of multimedia technology in vocal music teaching significantly improves the teaching efficiency. Taking the vocal music course of a school of music as an example, the school introduced multimedia technology and tracked the teaching efficiency. By comparing the average time for students to master vocal skills before and after the introduction of multimedia technology, we can find that the time for students to master the same vocal skills is significantly reduced. Before the introduction of multimedia technology, the average time for students to master breathing skills was 43.5 minutes, but after the introduction of multimedia technology, this

time was reduced to 28.2 minutes, and the efficiency was increased by 35.1%. Similarly, the time required for students to master the vocal position was reduced from 48.7 minutes to 33.4 minutes, and the efficiency was increased by 31.5%. The mastery time of resonance control has also been reduced from 59.3 minutes to 39.8 minutes, and the efficiency has been increased by 32.9%. These data show that the application of multimedia technology not only improves the learning efficiency of students, but also improves the teaching efficiency of teachers.

Table 2. Changes in Students Interest in Vocal Music Courses Before and After The Introduction of Multimedia Technology

Interest degree	Introduce the multimedia technology before the (%)	After introducing multimedia technology, (%)	change rate
Very interested in	34.7	67.3	+32.6%
be interested in	41.5	29.8	-11.7%
same as	14.6	3.1	-11.5%
lose interest in	9.2	0.0	-9.2%

Before the introduction of multimedia technology, students interest in vocal music courses was generally low, with only 34.7% of students saying "very interested". With the introduction of multimedia technology, the

proportion increased to 67.3 percent, or 32.6 percent. At the same time, the proportion of students who were "not interested" decreased from 9.2% to 0%, indicating that the application of multimedia technology

effectively eliminated students resistance to vocal music courses. The application of multimedia technology makes the teaching content more vivid and interesting.

3.3 Promote the All-Round Development of Students

Table 3. Improvement of Students Ability Before and After the Introduction of Multimedia Technology

Ability field	Before introducing multimedia technology (average score)	After introducing multimedia technology (average score)	Promotion rate
creativity	7.3	8.6	+17.8%
Critical thinking	7.1	8.4	+18.3%
independent learning ability	7.0	8.5	+21.4%

Before the introduction of multimedia technology, students had relatively low mean scores for creativity, critical thinking, and self-directed learning ability of 7.3, 7.1, and 7.0, respectively. After the introduction of multimedia technology, the average score of these abilities increased to 8.6, 8.4 and 8.5, respectively, with the improvement rates of 17.8%, 18.3% and 21.4%, respectively. The application of multimedia technology enables students to stimulate their creativity by watching different styles of vocal performances and analyzing vocal works in different periods. At the same time, through online discussion and debate, students can exercise their critical thinking ability. In addition, the personalized learning resources and independent learning platform provided by multimedia technology also greatly improve students independent learning ability.

4. Conclusion

The application of multimedia technology in vocal music teaching is of great significance and value. It can not only improve the teaching

efficiency, stimulate students interest in learning, but also promote the all-round development of students. However, there are also some problems in the application of multimedia technology, which requires the joint efforts of teachers and students to choose and use multimedia technology reasonably, realize the effective integration of technology and teaching, and improve the effect of vocal music teaching.

References

- [1] Ge Haitao. Application of multimedia technology in vocal music teaching [J]. Drama House, 2023, (18): 111-113.
- [2] Li Lidan. Development and innovative exploration of vocal music teaching in colleges and universities in the new era [J]. Journal of Suihua College, 2023, 43 (02): 127-129.
- [3] Zhang Zijing. Analysis on the application of multimedia in vocal music teaching [J]. Chinese Journal of Multimedia and Network Teaching (Chinese Journal), 2023, (01): 17-20.