Practical Research on Digital Technology in Art Appreciation Teaching in Senior High School

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Abstract: With the rapid development of information technology, digital technology has been widely used in the field of education, which brings new opportunities and challenges to traditional art appreciation teaching. Through digital means such as multimedia teaching, online teaching platform and VR technology, this study deeply analyzes the specific application of these technologies in art appreciation teaching in senior high schools and their influence on students' interest in learning, aesthetic ability, creativity and teacher-student interaction. The research adopts the methods of questionnaire survey, classroom observation and in-depth interview, and makes an empirical study on 300 senior high school students in three senior high schools in a city. The results show that the application of digital technology has significantly enhanced students' interest in and participation in the course of art appreciation, and the vividness and intuition of works display make it easier for students to understand and appreciate the connotation and style of works of art. In addition, students have improved their appreciation ability, understanding of works' connotation, interpretation of works' style and sensitivity. At the same time, this study also found the challenges faced by digital technology in the application process, such as rapid technology update, insufficient teacher training and uneven allocation of teaching resources. In view of these challenges, this paper puts forward some countermeasures and suggestions, such as establishing continuous learning mechanism, strengthening teacher training, selecting easy-to-operate digital tools and optimizing the allocation of teaching resources.

1. Introduction

With the rapid development of information technology, digital technology has penetrated into every aspect of our lives, and education is no exception. Especially in the current digital era, art appreciation teaching in senior high schools is facing unprecedented opportunities and challenges. Although the traditional teaching method of art appreciation is classic and profound, it has some limitations in attracting students' interest and improving teaching efficiency [1]. Digital technology provides new possibilities for art appreciation teaching with its intuitive, interactive and multimedia characteristics.

However, how to effectively use digital technology to improve the quality of high school art appreciation teaching, so that it can not only maintain the depth and breadth of art education, but

also stimulate students' interest in learning and creativity, which has become an urgent problem in the field of art education [2]. The purpose of this study is to explore the best practice of digital technology in art appreciation teaching in senior high schools, so as to improve students' aesthetic ability, enrich teaching methods and optimize teaching resources. This not only helps to improve the quality of art education, but also helps to cultivate students' comprehensive quality, so that they can better understand and appreciate art in the digital world.

2. Practical application of digital technology in art appreciation teaching in senior high school

2.1. The concrete application of digital technology in art appreciation teaching in senior high school

(1) Multimedia instruction

Multimedia teaching is one of the most common applications of digital technology in art appreciation. By using computers, projectors and other multimedia devices, teachers can display high-definition pictures and videos of art works, so that students can appreciate and understand art works more intuitively. At the same time, teachers can also make rich courseware with the help of multimedia software, and integrate various media elements such as words, images, audio and video, thus providing more vivid and comprehensive teaching content [3]. This teaching method can not only attract students' attention and improve their interest in learning, but also help them to understand the connotation and style of works of art more deeply.

(2) Network teaching platform

With the continuous development of network technology, network teaching platform is playing an increasingly important role in art appreciation teaching in senior high schools. Through the network teaching platform, teachers can upload and share rich teaching resources, such as electronic courseware, art picture library, video explanation, etc. [4-5]. Students can access these resources anytime, anywhere for autonomous learning and expansion. In addition, the online teaching platform also provides functions such as online discussion, homework submission and correction, which strengthens the interaction and communication between teachers and students and improves the teaching efficiency.

(3) VR technology

VR technology is a new digital technology emerging in recent years, and it also shows great potential in art appreciation teaching in senior high schools. Through VR technology, students can feel the scenes depicted by works of art in an immersive way, and get a more real and profound artistic experience [6]. For example, when appreciating classical oil paintings, teachers can use VR technology to reproduce the historical scenes in the paintings, so that students can be exposed to the environment of that era, so as to better understand the background and significance of the paintings. This teaching method can not only enhance students' sense of immersion and experience, but also stimulate their imagination and creativity.

2.2. Assist teachers to display art works and provide rich visual experience

In the course of art appreciation in senior high school, digital technology, with its unique advantages, greatly assists teachers to display art works and provides students with an unprecedented rich visual experience. Digital technology makes the details of art works perfectly presented through high-definition projection and multimedia display [7]. Traditional static painting display is often limited by the canvas size and viewing distance, while digital technology can enlarge every detail of the painting, so that students can clearly see the painter's brush strokes, the use of colors and the layering of the picture. This not only helps students better understand the skills

and styles of painting, but also stimulates their interest in artistic creation.

Digital technology can let students observe the multi-dimensional appearance of works of art through dynamic display. For example, by rotating, zooming and switching perspectives, students can appreciate the three-dimensional form of sculpture or architectural works in an all-round way, and this dynamic visual effect is unmatched by traditional display methods [8]. In addition, digital technology can also simulate different lighting conditions and environmental backgrounds, and show the visual effects of works in different situations, thus deepening students' understanding of the aesthetic feeling and expressive force of works.

The interactivity of digital technology has also brought innovation to the teaching of art appreciation. Teachers can let students participate in the interpretation and discussion of works in class in real time through touch screen or special software. Students can directly mark, enlarge, reduce or adjust colors on their works. This interactive learning method not only enhances students' participation in learning, but also makes teaching more lively and interesting. Digital technology can also integrate a variety of media resources, such as audio, video and text commentary, to provide more rich background information for art works. While displaying the works, teachers can play video materials about the historical background, the painter's life or the creative process to help students understand the story and cultural connotation behind the works more comprehensively.

2.3. Help students deeply understand the connotation and style of art works

Digital technology can make students observe the details of art works more clearly through high-definition image display. By magnifying and carefully observing the brush strokes, color application and composition of the painting, students can understand the artist's creative intention and artistic style more deeply. This in-depth exploration of details will help students grasp the essence of the work and better appreciate its artistic charm.

Digital technology can provide students with rich background information and interactive learning environment, and help them understand the historical background, cultural connotation and social significance of art works more comprehensively. For example, through the digital resource library, students can easily obtain information about the painter's life, creative background and the influence of his works in history. This information not only helps students better understand the connotation of the works, but also stimulates their interest in learning and desire to explore. Furthermore, VR and AR technologies in digital technology can create an immersive artistic experience for students. Through these technologies, students can be in the scene depicted in the painting and interact with the works, so as to feel the emotions and thoughts conveyed by the works more intuitively. This immersive experience helps students to understand the artistic conception and style of the works more deeply and improve their artistic appreciation ability.

Digital technology can also provide students with a creative platform, so that they can deeply understand the creative process and style formation of art works through practical operation. For example, students can use digital painting tools to copy or create, and experience the application of different painting styles and techniques through personal practice. This practical learning method not only helps students master painting skills, but also deepens their understanding of the style and connotation of fine arts works.

2.4. Promote the interaction between teachers and students, and improve students' learning interest and participation

Digital technology creates more opportunities for interaction between teachers and students by providing diverse ways of interaction. For example, using electronic whiteboard or touch screen, teachers can display art works in real time and invite students to mark, discuss and answer questions

on the screen. This kind of instant interaction not only makes students more involved in the classroom, but also allows teachers to get students' feedback in time and adjust teaching strategies. The application of online teaching platform has also greatly promoted the interaction between teachers and students. Teachers can publish discussion topics, homework and tests through the platform to encourage students to participate and communicate online. Students can ask questions, share ideas and works on the platform, and get timely responses from teachers and classmates. This online interactive mode breaks the limitation of time and space and makes teaching more flexible and efficient.

Gamification learning elements in digital technology can also effectively improve students' learning interest and participation. For example, teachers can design interactive games or challenge tasks related to art appreciation, so that students can learn art knowledge and improve their appreciation ability in the process of completing the tasks. This entertaining way not only makes students willing to participate, but also deepens their understanding and memory of knowledge. Digital technology can also meet students' different learning needs and interests through the design of personalized learning paths. Teachers can use data analysis tools to understand each student's learning situation and preferences and recommend suitable art works and learning resources for them. This personalized learning style makes students feel more concerned and supported, thus improving their learning enthusiasm and participation.

3. Analysis of practical effect

3.1. Research methods and objects

This study adopts empirical research methods, and collects data through questionnaires, classroom observation and in-depth interviews. The research object is 300 senior high school students from three high schools in a city, all of whom participated in the art appreciation course supported by digital technology.

In this study, questionnaire survey, classroom observation, in-depth interview and data analysis are used to evaluate the course of art appreciation and its teaching effect. Specifically, through the questionnaire survey of students before and after the course, the data about students' interest in art appreciation course, learning attitude and the improvement of aesthetic ability were collected. At the same time, through on-the-spot observation of classroom teaching, the application of digital technology in art appreciation class, the interaction and participation of students and the teaching methods of teachers are recorded. In order to get a deeper understanding of students' views and experiences, some students were randomly selected for in-depth interviews after the course. Finally, the questionnaire data are quantitatively analyzed by statistical software, and qualitative analysis is made by combining classroom observation and interview content, so as to comprehensively evaluate the course effect and the application value of digital technology.

3.2. Evaluation of the overall effect of digital technology in art appreciation teaching in senior high school

Through questionnaires and interviews, it is found that most students are satisfied with the art appreciation course supported by digital technology. They believe that digital technology makes the exhibition of works more vivid and intuitive, and improves their interest in learning. At the same time, students' participation in the course is obviously improved, and they are more willing to express their opinions and participate in the discussion (see Table 1).

Table 1: Students' attitude towards the art appreciation course supported by digital technology

Attitude index	Very satisfied (%)	Satisfied (%)	General (%)	Not satisfied (%)	Very dissatisfied (%)
course content	45	35	15	5	0
Digital technology application	50	30	15	4	1
The vividness of the work display	60	25	10	4	1
Promotion of learning interest	55	30	12	3	0
Course participation	40	40	15	4	1

In terms of improving aesthetic ability, students' appreciation ability, understanding and analysis ability of artistic works have all been improved. They can interpret the connotation and style of their works more accurately, and they are more sensitive to artistic works. See Table 2 for details.

Table 2: Degree of improvement of aesthetic ability

Aesthetic ability improvement index	Significant improvement (%)	Improved (%)	No change (%)	Decrease (%)
connoisseurship	35	45	15	4
Understanding of works' connotation	40	38	17	4
Interpretation of work style	38	42	16	3
Perceptual acuity	30	50	16	3

Digital technology has a significant impact on the improvement of students' ability. First of all, through technologies such as high-definition images and VR, digital technology provides students with rich visual experience, which helps them to observe and analyze their works more carefully, thus improving their aesthetic ability. Secondly, the interaction of digital technology stimulates students' creative desire, enabling them to create art by themselves through digital painting, design and other software, thus cultivating innovative thinking and practical ability. Finally, digital technology encourages students to study and explore independently. Through online discussion and group cooperation, students learn to examine works from different angles and cultivate critical thinking.

Based on the results of questionnaire survey, classroom observation and in-depth interview, this study holds that digital technology has a significant effect in art appreciation teaching in senior high schools. It not only enhances students' interest and participation in learning, but also effectively improves students' aesthetic ability, creativity and critical thinking. At the same time, digital technology also provides teachers with more teaching means and resources, enriching the teaching content and form. Therefore, it can be considered that digital technology has a wide application prospect and popularization value in art appreciation teaching in senior high schools.

4. Challenges and countermeasures

In the teaching of art appreciation in senior high school, although the application of digital technology brings many advantages, it also faces challenges such as rapid technology update, insufficient teacher training and uneven allocation of teaching resources. In view of these problems, it is suggested to establish a continuous learning mechanism and choose easy-to-operate digital tools to meet the challenge of technological upgrading; Enhance teachers' digital technology application ability by strengthening teacher training and establishing incentive mechanism; At the same time, optimize the allocation of teaching resources and encourage resource sharing to improve the utilization efficiency of resources, so as to better integrate digital technology into art appreciation courses.

Facing the challenge of digital technology in the teaching practice of art appreciation in senior high schools, we need to take corresponding countermeasures and suggestions from the aspects of teacher training, technology updating and teaching resource allocation. By constantly improving the technical literacy of teachers and students, optimizing the allocation of teaching resources, we can give full play to the advantages of digital technology in art appreciation teaching in senior high schools and improve the teaching quality and effect.

5. Conclusion

The application of digital technology has significantly improved the teaching effect of art appreciation course in senior high school. Through multimedia display, online teaching platform and VR, it not only enriches the teaching content, improves students' interest and participation in learning, but also effectively enhances students' aesthetic ability, creativity and critical thinking. Digital technology provides new possibilities for art appreciation teaching with its intuitive, interactive and multimedia characteristics. In particular, VR technology can enable students to feel the scenes depicted by works of art in an immersive way and gain a more real and profound artistic experience. Based on the results of questionnaire survey, classroom observation and in-depth interview, digital technology has a wide application prospect and popularization value in art appreciation teaching in senior high schools. It not only helps to improve the quality of art education, but also helps to cultivate students' comprehensive quality, so that they can better understand and appreciate art in the digital world. Although digital technology shows great potential in the teaching of art appreciation in senior high schools, it also faces challenges such as rapid technology update, insufficient teacher training and uneven allocation of teaching resources. It is suggested to establish a continuous learning mechanism, strengthen teacher training and optimize the allocation of teaching resources in order to improve teaching quality and effect.

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