

Retraction

Retracted: The Application of Modern Computer-Aided Technology in Fine Art Education

Security and Communication Networks

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This article has been retracted by Hindawi, as publisher, following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of systematic manipulation of the publication and peer-review process. We cannot, therefore, vouch for the reliability or integrity of this article.

Please note that this notice is intended solely to alert readers that the peer-review process of this article has been compromised.

Wiley and Hindawi regret that the usual quality checks did not identify these issues before publication and have since put additional measures in place to safeguard research integrity.

We wish to credit our Research Integrity and Research Publishing teams and anonymous and named external researchers and research integrity experts for contributing to this investigation.

The corresponding author, as the representative of all authors, has been given the opportunity to register their agreement or disagreement to this retraction. We have kept a record of any response received.

References

- [1] B. Wang, "The Application of Modern Computer-Aided Technology in Fine Art Education," *Security and Communication Networks*, vol. 2022, Article ID 8038178, 10 pages, 2022.

Research Article

The Application of Modern Computer-Aided Technology in Fine Art Education

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With the popularization of modern computer technology, human society has stepped into the information age. Modern computer technology will have an all-round and deep impact on fine art education in China. In fine art education, various information devices play an important role in broadening the resources of fine art education and effectively improving the quality of fine art education. This study analyzes fine art education in the digital era and studies how the quality of fine art education can be improved through computer-aided technology.

1. Introduction

At the beginning of the new century, human society has stepped into the information age [1]. With the development and popularity of computer technology and network technology and the rapid extension of modern information technology in the field of education, traditional fine art education is facing an all-round and deep-seated challenge [2, 3]. In the face of such challenges, how fine art education can conform to the trend, change the ideology of educators, and how it can comprehensively and rationally use modern information technology to optimize the teaching process, develop educational teaching resources, promote educational teaching reform, and thus improve the quality of education and teaching, is the main task facing fine art education in China at present [4].

Professor Schlomann [5] of the Massachusetts Institute of Technology pointed out that in order to understand a society, we must study the information and communication facilities belonging to that society. As we can see from the history of human civilization, each revolution in media technology has changed the way humans live, work, and think. Education, as an important aspect of society's activities, is naturally affected. When writing was used as a medium, schools were created, and the creation and development of printing technology led to the birth of the

modern school. Today, in the face of modern computer technology, our education is facing such an inevitable change. Modern information technology, represented by multimedia technology, network technology, and virtual simulation technology, is characterized by multiple sensory stimulations, high information transmission volume, fast transmission speed, a wide range of applications, intuitive images, strong interactivity, and ease of use [6, 7]. Its combination with fine art education will certainly have a great impact on all aspects of fine art education, making fine art teaching develop in a direction more suitable for the content and characteristics of fine art subjects, making fine art teaching individualized, personalized and independent, thus improving the efficiency and level of fine art teaching as a whole. Of course, this is a test for fine art education. The old concept of education, the form of teaching organization, and the ways and means of education and teaching are bound to be impacted in the new period, causing contradictions and conflicts. At the same time, it is an opportunity to develop and improve our fine art education in the midst of change. As a Canadian scholar, Hawlina [8] says that "Conflict and diversity are our friends, and conflict in complex and turbulent conditions is likely to be associated with creative breakthroughs." We look forward to the new vitality of fine art education driven by modern information technology.'

In the 21st century, the shift from visual culture to fine art education has brought about new educational trends, providing unlimited creativity and possibilities for fine art creation, which continue to permeate in the field of fine art, bringing about marked changes in the goals, fields, methods, and evaluation of education [9, 10]. Facing the future social life, students in colleges and universities are required to continuously improve their own literacy, as well as their creative thinking, critical visual literacy, etc. In 2010, the United Nations Educational, Scientific, and Cultural Organization in Seoul, Korea, held the second annual World Conference on Arts Education in Seoul, Korea, where the Seoul Agenda for the development of fine arts education aimed to play an important role in digital media. In 2011, at the 33rd International Art Club World Congress in Budapest, Hungary, the participating experts and scholars pointed out that in teaching, fine art teachers should help students appreciate and create images and other works of fine art in the digital age and in the innovation of teaching methods with the help of digital networks. In 2014, the 34th InSEA International Academy of Fine Arts of the World Congress elaborated on the fine art education diversity and raised important issues such as the teaching of new media fine art and contemporary fine art [11, 12]. Modern fine art education is a multifaceted field covering a wide range of knowledge systems, such as humanities, society, ecology, and technology. It should be identified in a way that includes integration. In the General College Fine Art Curriculum Standards (experimental), "modern media fine art" refers to the fine art of students learning to use video equipment, devices and technology, computer technology, and Internet resources to read and analyze images, pictures, and symbols to complete new media and creative works. Public images and symbols are employed in the teaching of fine art in science, technology, and the media to give students an understanding of the visual culture, the connection between society and culture, and the variety of meanings associated with human existence.

The Chinese educational system has gradually advanced and improved, but for a while in the past, research studies into the advancement of fine art education were rather neglected, leaving the previous educational philosophies and teaching techniques to still have an impact on the field today. The emergence of modern computer technology has provided a new direction for the development of fine art education, and China's fine art education has entered a stage of change. With the continuous development of the times, digital technology has brought great changes to people's daily lives and work. In the background of the digital era, the combination of teaching and information technology is also an inevitable trend in the development of education [13, 14].

2. A Brief Analysis of the Background of the Digital Era

2.1. Analysis of the Definition of the Digital Era. The digital era uses computers to transform information in life into digital information, the essence of which is the process of digital technology in the field of information advancing to

different areas of human life, which can be reflected in all corners of life, most notably within the field of mass communication. The comprehensive promotion of digital technology has provided great convenience to people's lives and work.

2.2. Analysis of the Essence of the Digital Era. The essence of the digital era is development, compatibility, and sharing. Openness is its most basic characteristic and it is the key to its development; and the characteristics of compatibility and sharing are the important foundation for the gradual development and improvement of the digital era (in Figure 1).

3. Analysis of the Characteristics of Contemporary Fine Art Education

3.1. Subjectivity. The most important feature of contemporary fine art education is students' participation, which is also the core content of contemporary fine art education [15, 16]. It mainly refers to the process of education based on the equal relationship between teachers and students, giving full play to students' subjective initiative and guiding them to form relevant abilities, qualities, and value orientations. In order to effectively engage students in experiential learning and to support their overall development, instructors must not only possess professional knowledge and skills but also be sensitive to the emotional needs of their charges.

3.2. Systematic. Contemporary fine art education no longer stays at the visual level, but puts forward more systematic requirements, requiring students to form their own knowledge structure system based on their own ability to discern, analyze, reflect, think, and judge on the basis of visual reception and then apply it to multiple fields, so as to effectively promote their own comprehensive development.

3.3. Diversity. With the development of the times, contemporary fine art education not only requires students to have certain knowledge but also requires them to have a pluralistic view of culture and the times. Specifically, teachers should dig deeper into the humanistic factors contained therein, on the basis of static pictures and moving images, and thus effectively broaden students' art horizons.

3.4. Criticism. The requirements of contemporary fine art education for students tend to be comprehensive, requiring not only good aesthetic and cognitive analysis skills but also critical visual reading skills. By cultivating students' visual reading skills, students are guided to explore the style and techniques of works and thus gain a deeper understanding of the aesthetic value and the meaning behind them.

3.5. Current Problems

3.5.1. Influence of Inherent Concepts. Some people do not attach much importance to fine art education, and thus fine art education has a low status in contemporary subject

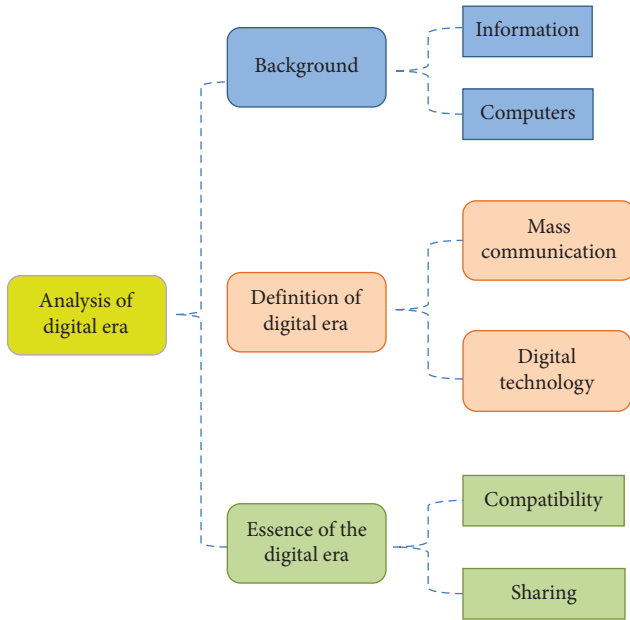


FIGURE 1: The technology roadmap analysis of the digital age.

education, which is very unfavorable to the development of fine art education. In addition, some teachers have an overly strong concept of further education and fail to cultivate students comprehensively, resulting in some students' low core fine art literacy, which limits the development of students' core fine art literacy.

3.5.2. Teaching Methods Are Too Single. Some teachers do not know enough about contemporary fine art education, and when they carry out teaching, they adopt the indoctrination teaching mode, which is not only ineffective but also frustrates students' learning enthusiasm, which in turn affects the development of later teaching.

3.5.3. Teacher Team Construction Is Not Perfect. In the process of fine art education, the construction of the teacher team is particularly important. As the initiator and guide of teaching activities, teachers directly affect the subsequent teaching efficiency and teaching effect. However, there is an aging phenomenon in the teaching team of some schools, and some teachers are not strong in adapting to the digital era, which is an important factor limiting the development of contemporary fine art education.

3.5.4. Lack of Effective Teaching Evaluation and Reflection. Teaching evaluation and reflection are the links to checking and filling in the gaps in teaching, and they are also the keys to the development of teaching. However, in the actual teaching process, the lack of teaching evaluation and reflection is caused by some teachers' insufficient cognition, which affects the efficiency and effectiveness of contemporary fine art education. The relationship curve between teaching evaluation and reflection and the efficiency and

effectiveness of contemporary art education is shown in Figure 2.

4. Change of Fine Art Education

4.1. From the Transmission of Knowledge to the Cultivation of Ability. Modern information technology is changing people's lives and work. In the field of fine art education, the society in which students live today and the society in which they will live and work in the future are very different from those in the past [17, 18]. The old concept that the function of education is to impart knowledge and skills is no longer suitable for the development of society and must be updated. From the perspective of discipline development, the new knowledge and technology related to fine art in the new society can be said to be rapidly developing and renewing as compared to before, as illustrated in Figure 3. It is almost a luxury to recognize and master all the new knowledge and technology. On the other hand, from the viewpoint of the channels of acquiring knowledge, in the information society, the channels for students to acquire new knowledge and skills are extremely diversified [19]. It is undoubtedly a great waste to use precious school education for such a purpose. Schooling should be an effective education that enables the educated to understand the process of development of knowledge structures so that they can master the ability to construct knowledge themselves. Educators must understand that knowledge is constructed by the learners themselves and not acquired by receiving it from teachers. School education should also equip the educated with the ability to live and work in the information society through effective education. Information overload will be the environment in which students must survive in the future, and being able to search for, pick out, and use information will be a survival skill. Nowadays, learning to search, classify, produce, communicate, and use knowledge creatively is the fundamental goal of education rather than simply teaching people how to record information.

Given the perspective of discipline development, the new knowledge and technology related to art are defined as a set $\chi = \{X_j\}_{j=1, \dots, J}$, where J is the information joints, and the position access to knowledge (u and v) of the j th a-joint in the fine art is denoted by the vector $X_j \in x$. Effective education consists of a process of the development of knowledge structures with the ability to live and work. $\varphi_t(\mathbf{X})$ in the information society through effective education providing confidence $S_{jt} \in R_w \times h$ for each joint j , where w and h are the ability to search, select, and use information, respectively, and t denotes the t th stage. In the first stage, the following equations can provide confidence scores to search, classify, create, communicate, and use the information.

$$\begin{aligned} \varphi_t &= 1(\mathbf{X} | \mathbf{I}), \\ \varphi_t &\longrightarrow \{s_1^j(\mathbf{X}_j = \mathbf{X})\}_{j=1, \dots, J+1}, \\ \varphi_t &= 1(\mathbf{X} | \mathbf{I}) \longrightarrow \{s_1^j(\mathbf{X}_j = \mathbf{X})\}_{j=1, \dots, J+1}. \end{aligned} \quad (1)$$

All subsequent stages generate new confidence scores using the contextual information from the previous stage:

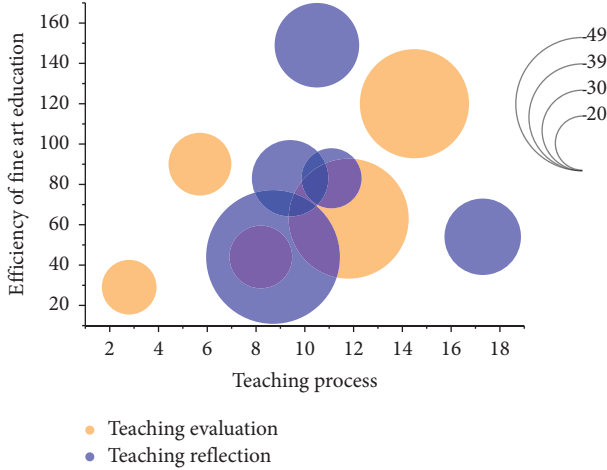


FIGURE 2: The relationship curve between teaching evaluation and reflection and the efficiency and effectiveness of contemporary art education.

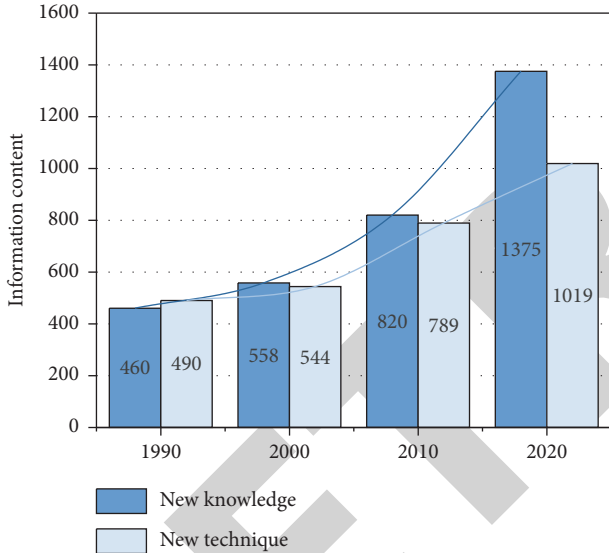


FIGURE 3: Comparison of the growth of new knowledge and new technology over time.

$$\begin{aligned} \varphi_t &> 1 [\mathbf{X} | \mathbf{I}, \psi(\mathbf{X}, \mathbf{S}_{t-1})], \\ 1 [\mathbf{X} | \mathbf{I}, \psi(\mathbf{X}, \mathbf{S}_{t-1})] &\longrightarrow \{s_t^j(\mathbf{X}_j = \mathbf{X})\}_{j=1, \dots, J+1}, \\ \varphi_t &> 1 [\mathbf{X} | \mathbf{I}, \psi(\mathbf{X}, \mathbf{S}_{t-1})] &\longrightarrow \{s_t^j(\mathbf{X}_j = \mathbf{X})\}_{j=1, \dots, J+1}. \end{aligned} \quad (2)$$

4.2. From Closed and Single Passive Learning to Open and Diversified Active Learning. With the development and popularity of network technology, the restrictions of time and space on learning have been completely lifted, and learning has becoming more free [20]. The network connects schools, families, libraries, museums, fine art galleries, and fine art research institutions. Anyone can get the information they need from the network without any limitation of time and space. From the perspective of fine art teaching,

fine art as a visual art, the “viewing” of artworks is an important part of the fine art learning process. Only through the “viewing” of a large number of artworks can we understand the universal laws of art in all their aspects and can we thoroughly understand and master the techniques and skills of each art discipline. The Internet, with its unique advantages of a large amount of information, fast retrieval, ease of use, and portability, meets the need for such “viewing” in fine art teaching. In the network, students can easily and quickly “watch” any artwork of each historical period that they need to “watch” at any time. A CD-ROM entitled “Encyclopedia of the World’s Best Sketches” contains the sketches of almost all the influential painters of the five centuries from the 15th-century Italian painter Pisanello to the late 20th-century French painter Marsal. Each painter’s masterpieces are included in a comprehensive manner. Taking German sketch master Menzel as an example, the CD-ROM contains 85 of his works, while the book “Menzel Sketch Collection” only contains 52 of his sketches. Thus, we believe that modern information technology has provided us with unprecedented convenience in fine art learning that transcends time and space. This convenience will undoubtedly greatly improve the efficiency of fine art learning. The traditional one-way indoctrination teaching method of teachers explaining and students taking notes, or teachers demonstrating and students copying, cannot adapt to the needs of the new situation as computer and network technology continue to develop, mature, and permeate into the field of education.

Network teaching, distance learning, virtual reality simulation teaching, and other new teaching methods have become possible. The information sources for art students have expanded from traditional teachers, textbooks, and picture books to art museums and museums worldwide, as well as the many professional art websites and forums on the Internet. Students can learn independently through human-computer dialogue using computer-assisted software. Students can also access professional art websites through the Internet to browse the latest art information and artworks, to learn about professional developments, and to gain visual experience [21, 22]. They can also log on to professional art forums for academic discussions or ask experts via e-mail to solve their problems, from which they can learn and consolidate their knowledge. In short, with the involvement of information technology, the ways of learning have become more diversified. In the presence of new learning styles, students’ transition from being passive recipients of knowledge to becoming active learners is observed. The learning initiative of the students is completely developed, which obviously increases the motivation of the students to learn and raises the level of learning quality.

Information sources for art students have originated from many professional art websites and forums on the Internet (each professional art website corresponds to a channel, which represents the x and y coordinates of the node, respectively), and then the introduction of multimedia digital technology is induced to produce more diversified learning methods. The involvement of information technology is performed as follows:

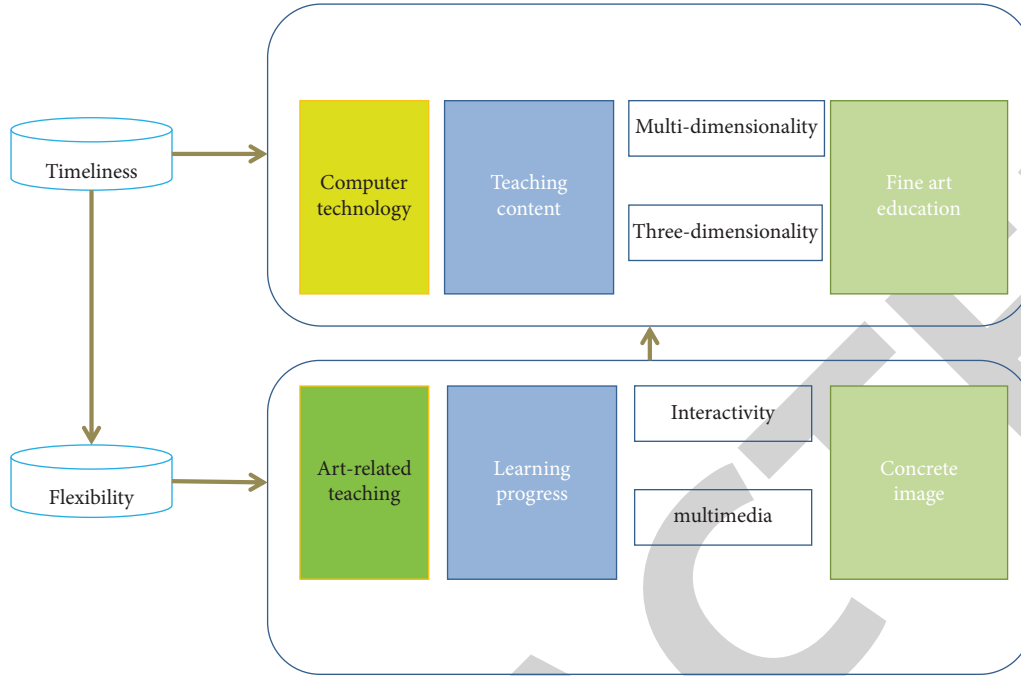


FIGURE 4: The advantages of computer technology in fine art education.

$$U_j = G[x_j + F_k(x_j) - x_i]h_k(x_j) + \sqrt{h_k(x_j)},$$

$$f_k(x_k) = \sum_j \frac{1}{\pi R^2} W_j, \tag{3}$$

$$f_k(x_k) = \sum_j \frac{1}{\pi R^2} G[x_j + F_k(x_j) - x_i]h_k(x_j).$$

5. The Advantages of Computer Technology in Fine Art Education

5.1. Timeliness. Computer technology can better meet the needs of fine art education by virtue of its own time-sensitive nature [23]. With the assistance of computer technology, teachers can show students the historical changes and evolution of art-related genres through the display of a large amount of information, which is different from the previous summary of a small amount of information but can deepen students' knowledge of art through the comparison and systematic introduction of a large amount of information. In addition, because computer technology can facilitate the collection of contemporary teaching content, the usefulness of fine art teaching will be greatly enhanced, and the distance between students and artworks can be eliminated (Figure 4).

5.2. Multidimensionality. The application of this multidimensional feature to fine art education will free fine art education from the confines of a small teacher, and the tutor in a foreign country will be able to teach students through computer technology, which naturally makes fine art

education much more flexible, and the better development of fine art education will also be strongly supported.

5.3. Flexibility. If computer technology is used in fine art education, students will be able to learn art at any time and any place through the Internet, and lifelong education will become a reality. Under the influence of computer technology, students can be free from the shackles of family origin, status and wealth, and can participate in fine art education on an equal footing, which naturally increases the effectiveness of fine art education.

5.4. Three-Dimensionality. Under the role of computer technology, images, colors, and other factors can form a multimedia three-dimensional information system through the collection, and this is the best expression of the multimedia nature of computer technology [24]. Under the influence of the multimedia of computer technology, fine art education can make many abstract and complicated art-related teaching contents become concrete images through multimedia, so students' interest in art-related learning will be greatly enhanced, which can also change students' passive fine art learning in the past into active learning.

5.5. Interactivity. Under the influence of interactivity, students can freely grasp the learning progress and can choose the learning content in the computer technology-assisted fine art education, and the better human-computer interaction achieved in this process will also make the effectiveness of fine art education to be greatly improved.

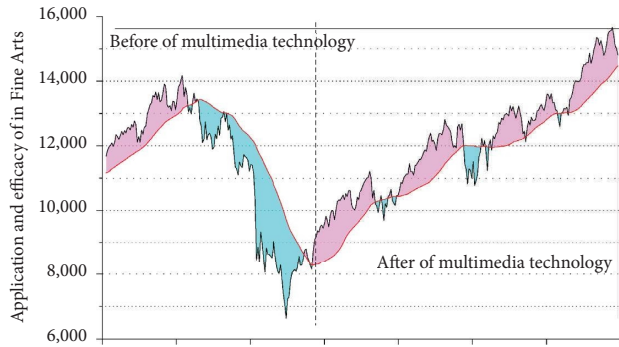


FIGURE 5: Relationship curve between multimedia technology and the art education effect.

6. Strategies to Realize the Application of Computer Technology in Fine Art Education

6.1. The Application of Multimedia Technology. For the application of multimedia technology in fine art education, the composition of this computer technology can achieve better application in a variety of teaching applications such as drawing, color, composition, art appreciation, and decorative patterns [25]. Take the application of multimedia technology in art appreciation as an example. In traditional fine art education, this education itself tends to be more of a rational knowledge transfer, but the application of multimedia technology makes fine art education to have comprehensive content of sound, text, pictures, and images, which makes the teaching related to art appreciation better developed, as illustrated in Figure 5. In the specific “European Renaissance” painting appreciation, without multimedia equipment, this part of teaching is usually done through textbooks and materials prepared by teachers, but with the support of multimedia equipment, teachers can apply multimedia equipment to play scenic film clips of Florence, Italy, and the works of the great masters of Renaissance painting, and these in turn can show the Renaissance. In this process, if the teacher can supplement the explanation with short stories about Renaissance painters, the rigorous, grand and solemn artistic style of Renaissance painting can be conveyed to students in a more intuitive way. In the teaching of appreciation of Chinese sculptures such as “Terracotta Warriors and Horses” and “Terracotta Warriors and Horses of the First Qin Emperor,” students do not have access to the actual objects and imitations, so this teaching cannot be done only through pictures in books, but with the support of multimedia technology, the multimedia screen can show the relevant sculptures in front of students in 360 degrees without any dead angle, and if this process is supplemented with ethnic music, students will become more attentive to participate in the appreciation teaching, and this process will greatly stimulate students’ interest in fine art learning, and the effectiveness of college fine art education will be greatly enhanced.

6.2. Application of Digital Interactive Technology. In addition to multimedia technology, digital interactive technology can also be applied in fine art education. In many large

museums, we can often see digital books that can recognize people’s movements, which is a typical digital interactive technology and combined with the characteristics of digital interactive technology, we can easily find that fine art education can better improve its effectiveness with the support of digital interactive technology. For fine art education, the teaching of art knowledge related to abstract space is often the difficult part of teaching. Students do not have the ability to enter this kind of abstract space to embody it, and the teaching of abstract space naturally cannot be better developed. With the support of digital interactive technology, students will participate in the learning of art knowledge as if they were in the real world, and they will unconsciously integrate it into the learning of art knowledge so that the effectiveness of fine art education can naturally be improved. We anticipate that digital interactive technology will play a bigger role in the future of fine art education because many scientific research organizations in China have already begun to investigate art-related teaching equipment mixed with digital interactive technology.

6.3. Application of Three-Dimensional Virtual Interactive Technology. There are two application modes of 3D virtual interactive technology: traditional and innovative.

6.3.1. Traditional Application Mode. In the traditional three-dimensional virtual interactive technology application of fine art education, students wear three-dimensional light gate glasses, and teachers apply three-dimensional virtual interactive technology to carry out the relevant fine art knowledge which is the main content of this traditional mode, and in this content of fine art education, students can, in the three-dimensional light gate glasses and three-dimensional virtual interactive technology support, watch three-dimensional artworks and the artist’s growth experience also. The growth experience of the artist can also be shown to students more vividly, which naturally makes fine art education better. It is worth noting that the traditional fine art education mode of 3D virtual interactive technology is more suitable for the theoretical teaching of fine art introduction, sculpture theory class, sketching, color, and drawing.

6.3.2. Innovative Application Mode. In addition to the traditional application mode, three-dimensional virtual interactive technology in fine art education is also an innovative application mode. This innovative application mode needs to be supported by VR equipment to be able to be successfully carried out. Specifically, teachers need to prepare VR equipment and open rooms for students, so that they can really feel the real virtual scenes of ancient clothing, Western palace interior scenes, Dunhuang cave murals, etc., through VR equipment, and if teachers can provide students with wireless Bluetooth data gloves, the virtual reality fine art teaching that students participate in can be further improved under the pressure and weight provided by the gloves. Fine art teaching will also be better developed as a result. It is

worth noting that this innovative application of three-dimensional virtual interactive technology is more suitable for fine art teaching and appreciation teaching. 3D virtual interaction technology (V_p) is chosen to measure the comparability between the art education mode and the innovative application mode, and the formula is

$$R_i = \sum_i \exp\{-d_{pi}^2/2S_p^2\sigma_i^2\}\delta(v_{pi} = 1),$$

$$OKS_p = \frac{R_i}{\sum \delta(v_{pi} = 1)}, \quad (4)$$

$$V_p = \frac{\sum_i \exp\{-d_{pi}^2/2S_p^2\sigma_i^2\}\delta(v_{pi} = 1)}{\sum \delta(v_{pi} = 1)},$$

where p is the ID of the 3D virtual interaction technology; i is the ID of the VR device; d_{pi} denotes the wireless Bluetooth data between the i -th key point predicted by the p -th VR device and the real labeled key point; S_2 denotes the pixel area occupied by the p -th virtual technology; and σ denotes the innovative application mode factor of the i -th key point.

7. The Significance of Modern Computer Technology Applied in Fine Art Education

7.1. Pay Attention to the Advantages of Digital Technology in Fine Art Teaching, and Improve Students' Art Literacy with the Clever Use of Digital Technology. Among the tools used in painting, paints and brushes are still indispensable elements in painting. The accumulation of paints according to painting techniques and sequences will produce paintings that are undoubtedly limited by the lighting environment, the size of the work, the type of work, and other factors. In addition to the external factors that can affect the painting process, the finished painting is not easily preserved, a situation that is sometimes very serious in fine art teaching. A beautiful painting may be destroyed by accidentally staining it with other paints, which is a loss of the work and interrupts the teaching process even more. It would take longer time and labor to redraw a picture, and the fine art teaching schedule does not allow for such remedial measures. Compared with traditional painting, computer painting can show one's design and creativity with digital graphics. Using computers to draw pictures means one does not have to worry about the work being damaged by paints, and it can also be displayed outside the classroom and can be reproduced and widely disseminated according to the designer's needs, which greatly improves the effect of art promotion. It can be said that modern information and digital technology has improved the efficiency of fine art education.

Students are expected to grasp the fundamentals of traditional painting throughout their studies, including painting and modeling techniques as well as picture coordination abilities. Traditional painting is a finished product that has been consistently improved and summarized by past generations. Fine art education has to impart painting skills

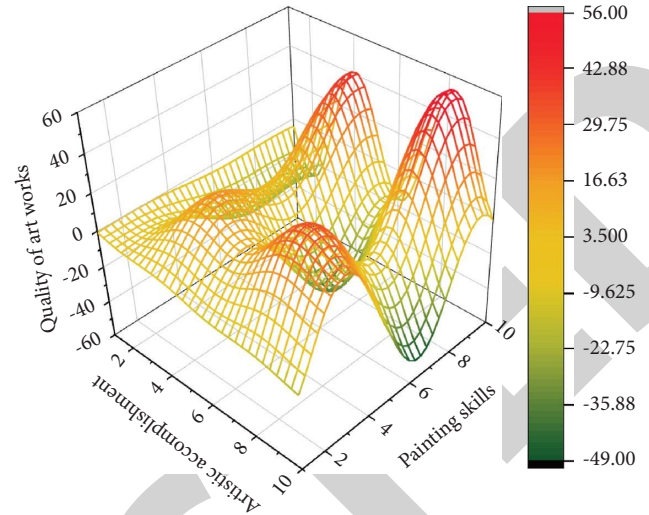


FIGURE 6: The relationship between the quality of students' creative works related to drawing technology and artistic literacy.

to students in a limited time and, more importantly, improve students' art literacy, while the results are often unsatisfactory, with problems such as students' poor mastery of painting skills and difficulties in improving quality education. The constantly improving digital painting technology and software functions can change the drawbacks of the previous teaching. As long as teachers guide students to put more energy into modeling skills exercises and picture construction, no matter how complex the colors are rendered, they can obtain the expected effect, and students will create paintings like the works of painting masters, which will certainly increase their interest in learning. Through the sample statistics, it is found that the quality of students' creative works is closely related to drawing technology and artistic literacy. The relationship between the three is shown in Figure 6.

7.2. Combine Traditional Painting and Digital Technology to Give Full Play to the Comprehensive Role of Fine Art Education. The application of digital technology is not to change traditional fine art teaching, but to effectively make up for the deficiencies existing in traditional painting and, to a certain extent, save financial, material, and human resources for fine art education, prompting teachers to spend more educational time on inspiring students' art inspiration, enhancing students' comprehension of paintings, and improving students' artistic quality. The combination of traditional painting and digital painting will undoubtedly improve the efficiency of college fine art teaching and students' art literacy. Modern computer art provides students with a new perspective in terms of line, color, composition, space, etc. Students can complete their learning tasks more easily and quickly through computer painting, and more importantly, they can master art concepts and art skills from it and can develop to a higher level. The teaching of fine art is not a study of painting skills alone but also involves the ability to recognize, shape, aesthetics, and other aspects. In

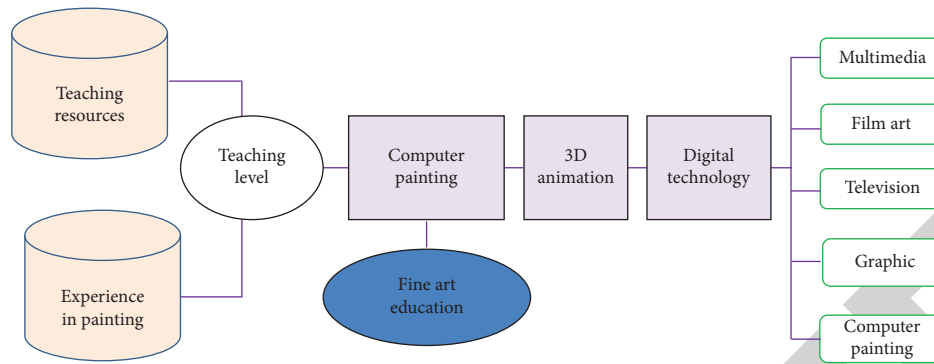


FIGURE 7: Method roadmap to improve the teaching level of fine art teachers.

order to completely realize the overall role of fine art education and to holistically purify the mind, students should not simply give up conventional painting before adopting computer painting software. Instead, they should blend the two skillfully.

7.3. Improve the Teaching Level of Fine Art Teachers.

There is no doubt that teachers are an important carrier to play the role of teaching resources and in imparting knowledge, especially in the digital era. Teachers need to have rich experience in painting so as to effectively improve the quality of fine art education in colleges and universities. It can be said that with multimedia teaching, computer painting and digital technology gradually became the social development trend and irreversible trend. Furthermore, it also became the teaching goal to be achieved in contemporary fine art education. Some fine art teachers are not strong in accepting new things and are relatively backward in both educational concepts and teaching methods. Therefore, changing the concept of fine art teachers is a prerequisite for realizing digital fine art education. Teachers should be made fully aware of the advantages of high efficiency and accuracy brought about by computer painting, and more importantly, they should realize that digital technology has been commonly applied to many fields such as 3D animation, film and television advertising design, and graphic design, so that teachers can take the initiative to enrich their teaching experience, change their teaching methods, and improve the effect of fine art education. At the same time, teachers' ability to use modern computer teaching should be continuously improved. The method roadmap to improve the teaching level of fine art teachers is shown in Figure 7. At present, many fine art teachers have rich experience in painting creation and advanced theories but often lack the ability to use computer technology. Teachers can be regularly organized to attend training in digital painting technology, and those who master new knowledge can lead students into the magical digital art world in teaching, exert their talents, and can continuously improve their artistic cultivation and artistic creativity. It can be said that digital technology has become one of the important means of modern fine art education. Compared with

other subjects, art has a closer connection with multimedia information technology. Teachers may easily produce paintings, edit them, and collage them at will using the editing, storage, and switching features of a computer with the use of digital technology, which significantly alters the way that fine art is taught while also enhancing the learning environment in the classroom.

7.4. Effectively Improve Art Literacy.

In the digital era, art is able to be taught repeatedly through information technology, making multiple connections to works of art, thus improving the quality of fine art education. In traditional fine art education, most drawing skills are summarized on the basis of previous experiences, which is the core of fine art education. It includes not only the skills of coordinating the picture as well as modeling involved in painting, but also the familiarity with the experimentation of painting tools and materials, as well as the reasonable way of operation. It is only through this all-round teaching that students can really learn how to appreciate and paint a piece of art. But this whole educational process is quite difficult and takes a long time. In education, it is a very difficult task to make students learn a lot of drawing skills in just a few years and at the same time improve their artistic skills. Through practical investigation, it is found that the quality of teaching is hardly satisfactory; many students have average skills in drawing and there is no obvious improvement in artistic quality; they often only get a diploma after several years of study, which is not in line with the purpose of our education and is not conducive to the future development of students. With digital technology, it is possible to get rid of the limitations in traditional teaching by transferring tedious tasks such as mixing paints to the computer and modulating complex colors with only simple instructions. Not only is accuracy guaranteed, but there is no need to invest more time and effort in the time-consuming and labor-intensive aspects of the process. Digital painting skills are growing as science and technology advance, and the advancement of software has made it possible to teach techniques that, in the past, could only be executed by masters. By seeing the works of masters, pupils can mature and develop their artistic qualities, and this will significantly raise their enthusiasm for learning.

8. Conclusion

In addition to being a recent invention in the field of fine art education, the utilization of contemporary computer-aided technology is also a sign of the times. The use of contemporary computer-aided technology in fine art education is covered in detail in this article, along with its benefits. Three methods are suggested for implementing computer technology in fine art education: multimedia technology, digital interactive technology, and three-dimensional virtual interactive technology. Thus, we can find that if we want computer technology to better support fine art education, relevant teachers must also master the way of fine art education combined with computer technology, and at the same time they must pay full attention to the advantages of modern computer technology in fine art education. They must skillfully improve art literacy with the help of digital technology, combine traditional teaching with digital technology, and give full play to the comprehensive role of fine art education, so that we can really achieve the better improvement of fine art education.

Data Availability

The experimental data supporting the current study are available from the author upon request.

Conflicts of Interest

The author declares that they have no conflicts of interest.

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