

Original Paper

Exploration on Teaching Reform of Public Art Specialty Based on Interactive Technology

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Received: August 21, 2023 Accepted: November 11, 2023 Online Published: November 27, 2023

doi:10.22158/wjeh.v5n4p189 URL: <http://dx.doi.org/10.22158/wjeh.v5n4p189>

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Project

Research on Teaching Reform in Higher Education Institutions in Jiangxi Province Provincial Project: “Research on Design Thinking and Teaching Mode of Public Art Majors under the Background of New Professional Construction” (Project No.: JXJG-20-11-16).

Abstract

Interactive technology refers to the technology of realizing the dialogue between people and computers in an effective way through computer input and output equipment, which can greatly facilitate the work of various industries in China. Based on this, this paper takes the teaching of public art specialty as an example to discuss the teaching reform method in combination with interactive technology. This paper lists the value of interactive technology in public art teaching, the current situation of low application rate, lack of equipment and unbalanced teaching content, and the improvement methods by strengthening teacher training, introducing equipment and standardizing the use of technology.

Keywords

interactive technology; Public art; reform in education

On November 22, 2022, the notice of the General Office of the Ministry of Education on printing and distributing the Guiding Outline of Public Art Courses in Colleges and Universities put forward the reform guidance for the education of public art courses in China, combining digitalization and

characteristics. Reasonable application of interactive technology in public art teaching can effectively improve teaching effect and promote students' comprehensive quality. In order to better help universities around China to apply interactive technology in public art teaching, this paper tries to discuss the value of interactive technology in public art teaching, in order to meet the needs of teaching reform and better ensure the quality of students' learning.

1. The Value of Interactive Technology in Public Art Teaching

1.1 Enrich the Expressions of Works of Art

In the teaching of public art, teachers can use digital interactive means to show the same work in different ways. The traditional teaching of public art majors mostly adopts copying picture books, dictation or teachers leading students to the exhibition hall to watch art works. The authenticity of art works and the convenience for students to watch them are lacking to some extent. The application of interactive software and equipment can make the exhibition of works of art in modern public art teaching more authentic (Zhang, Plum, & Zhang, 2023). On the one hand, in the teaching process of public art majors, teachers can use the interactive technology of 3D modeling to restore the works of art that need to be displayed from the flat picture form, so as to show the detailed features of the works of art more perfectly. At the same time, the interactive display technology of 3D modeling can facilitate the rotation, amplification, splitting and other operations of the three-dimensional works of art in the exhibition process, and facilitate the students of public art majors to learn the works of art from the structural level and details, so as to absorb the teaching content more comprehensively. On the other hand, in the teaching process of public art majors, teachers can use VR, AR and MR technologies to digitally restore works of art. Through the interactive display mode of virtual and reality, students can feel the real situation of works of art and appreciate the works of art stored in the exhibition hall at close range, so as to better accept the rendering of artistic atmosphere and increase the course understanding effect in a way close to real works.

1.2 Expand the Participation of Artistic Creation

Diversified virtual painting interactive software in public art teaching can effectively enhance students' participation in artistic creation. The traditional artistic creation activities in the teaching process of public art majors rely on the use of tools such as paper, pen and drawing board, which has certain requirements for the creation time and venue. When human-computer interaction technology is applied to the teaching of public art majors, students can use computer painting software to operate a variety of virtual strokes for artistic creation, and can also use touch, sound and gesture manipulation to add more visual artistic elements to artistic creation, expand the expression of artistic works and help students to create diversified works. At the same time, interactive technology can also provide a certain display platform for students in public professional teaching. By using Internet information technology, students can publish their artistic works to the network platform and interact with viewers through various channels, which can effectively increase students' self-confidence in artistic creation, stimulate

more students to participate in artistic creation and reflect on their own creative ideas by integrating various opinions.

1.3 Stimulate Students' Artistic Inspiration

Students in the teaching of public art majors can use online interactive tools and platforms to inspire artistic inspiration from many angles. In the traditional teaching process of public art majors, students' inspiration comes more from teachers' ideas of explaining works of art in class and from visiting art exhibition halls in their spare time. The sources of inspiration are limited. Under the influence of interactive technology, students in modern public art teaching can get a clearer understanding of the creation process and creative ideas of virtual works of art by disassembling the layers, structures and colors, and appreciate the expression core of works of art from multiple angles such as structural level and external performance, so as to obtain enlightening ideas (Xie & Zhang, 2023). At the same time, students majoring in public art can use the art forum built by information interaction technology to discuss their works with online art, feel the differences in art in a diversified way, and stimulate artistic inspiration in the collision of thinking. In addition, tools of interactive technology, such as ChatGPT and Bard, can help students majoring in public art to re-create their own artistic works. Compared with the artistic works modified by big data interactive technology, they can intuitively see the artistic differences brought by different styles, thus enabling students to gain a wide range of innovative ideas.

1.4 Improve the Efficiency of Art Teaching

In the teaching of public art specialty, teachers can observe students' learning interest by using interactive open platform, and improve teaching efficiency. In the traditional teaching of public art, teachers' observation of students' interest in learning is limited, and most of them obtain information by students' classroom performance in their spare time, which is one-sided. Teachers can strengthen the observation of students through the Internet homework interactive platform and media resource library. First, teachers can collect students' click marks in the media resource library, understand students' curious direction of works of art, and then add relevant content to teaching in the future teaching process to stimulate students' learning motivation. Secondly, teachers can check the comprehensive statistics of students' test scores in the interactive operation platform, and think about how to improve teaching methods in combination with the teaching content (Ye, 2023). At the same time, teachers majoring in public art can also find out the basic situation of students according to their differences in the interactive operation platform test, build students' ability files from basic knowledge, professional knowledge, artistic thinking and professional skills, and provide targeted counseling for students' weak links, so as to improve students' learning effect with differentiated teaching.

2. The Present Situation of Interactive Technology in Public Art Teaching

2.1 Teachers' Ability Is Difficult to Meet the Needs of Teaching

Interactive technology can play an important role in the teaching of public art courses and cultivate students' artistic thinking. However, at present, it seems that the teaching effect of the integration of

interactive technology in the teaching of public art majors in some colleges and universities is not obvious. The main reason is that the application of interactive technology in courses requires teachers to have both the professional teaching ability of public art and the level of interactive technology that can be applied to teaching. However, some teachers of public art majors have not participated in relevant training before, so there are some weaknesses in the application of interactive technology. In the actual teaching process, the lack of teachers' level will lead to the deformation of interactive technology operation in the course, which will lead to students' inability to receive teaching guidance and improve in a more advanced form.

2.2 Interactive Technology Equipment Is Difficult to Meet the Teaching Needs

Interactive technology equipment can help interactive technology to be more fully used in public art teaching, enrich teaching content and improve teaching quality. However, at present, there is an obvious mismatch between the construction of interactive technology and equipment and the teaching needs in the teaching of public art majors in China. Although many universities have increased their investment in teaching equipment in recent years, there is not much allocation in interactive technology and equipment, and the related large-scale virtual laboratories and interactive integrated equipment are lacking, which leads to students' inability to actually feel the works of art in the teaching process of public art majors, which leads to conceptual ambiguity on the teaching content, thus deviating from the learning direction.

2.3 The Combination of Public Art and Interactive Technology Is Scarce

Combining the teaching materials based on interactive technology and public art specialty can help students better understand the course content and help teachers teach more reasonably. However, due to the relatively new development of public art specialty and interactive technology, some schools do not have enough characteristic teaching materials combining data and time research and development in the process of professional development, and teachers do not have relevant teaching materials to carry out teaching work, so it is impossible to reasonably allocate teaching time and plan the proportion of teaching content within limited teaching time, resulting in the phenomenon that interactive technology is widely used or rarely used in public art specialty teaching, which can not effectively cooperate with the teaching content of artistic creation, resulting in the decline of students' learning effect.

3. Interactive Technology in Public Art Teaching Reform Methods

3.1 Training Specialized Technical Teachers

Regarding the application effect of interactive technology in public art teaching, schools should launch targeted training courses to improve teachers' professional level, thus helping interactive technology to be better applied in teaching. First of all, the school should make a thorough investigation of the teachers of public art major, define the standards from two aspects: the application of interactive technology and the integration of interactive technology and public art teaching, understand the comprehensive ability level of teachers in the major, collect the list of teachers who can't meet the

needs of applying interactive technology to assist the teaching of public art major temporarily, and arrange a unified training time for the application of interactive technology. Secondly, the school should invite excellent teachers who have both the application level of interactive technology and the teaching experience of public art majors to enter the school, and share their teaching experience with the teachers who have participated in the training in the school, which should include the level of interactive technology that they think is needed in the teaching of public art majors, the interactive software that they should master, the combination method of interactive technology and public art disciplines, etc., to help teachers confirm the training objectives and compare their learning progress with this as a reference. At the same time, the school should also arrange teachers to participate in the training courses of interactive technology learning once a month according to the teaching needs of public art majors in the school, pay attention to the learning progress of interactive software, interactive language and interactive equipment in the courses, arrange teachers to conduct simulated classroom tests after the completion of the monthly study to test whether teachers have the ability to improve in the learning of interactive technology, evaluate the application level of interactive technology among teachers in public art teaching using a percentile scoring mechanism. Finally, the school should organize teachers' meetings every week, so that the teachers of public art majors can summarize the application problems of interactive technology encountered in this week's teaching process into a document form for reporting, invite the school to brainstorm with professional teachers to solve the problems together, and summarize the laws of the problems to prevent similar problems from happening. If the teaching problems are caused by teachers' abilities, schools should check whether they are universal. For example, excellent teachers with spare time should be arranged for teaching and learning. For common problems, professionals should be invited to enter the school for guidance, so as to solve the causes, thus helping teachers to correctly improve the use effect of interactive technology in public art teaching and increase teaching efficiency.

3.2 Increase Capital Investment to Update Interactive Equipment

Interactive equipment to meet the teaching needs is necessary for the application of interactive technology in public art majors. In view of the current situation that interactive equipment can not meet the teaching needs, schools should reasonably increase the capital budget and purchase new interactive equipment according to the teaching objectives. First of all, schools should communicate with public art teachers, make clear the specific requirements of teaching tasks for interactive equipment, confirm the specifications, models and approximate prices of the required equipment, set purchase intention targets, increase the procurement budget accordingly, plan the placement site of interactive equipment in schools, clean up the clearing in advance and prepare for the placement (Cai & Yang, 2023). Secondly, schools can contact interactive equipment in interactive technology exhibitions or factory dealers, and further communicate and understand the specific parameters of the equipment by watching the demonstration of equipment operation. Because it is used as the teaching scope, the foundation of the equipment is to put safety first, and the equipment materials should be environmentally-friendly

models that are suitable for public places without toxic substances. When preparing for purchase, schools should also refer to the seller's user reputation and enterprise scale to ensure its sales reputation and service quality. Finally, after signing the purchase guarantee contract, the school plans to place the interactive facilities in the school site, and simultaneously builds the placement environment of the interactive facilities. When the equipment is transported to the school, it will arrange relevant teachers to learn specific operation methods, make a learning plan related to the equipment, and regularly maintain the equipment in daily life, and pay attention to the equipment failure and aging problems in time. If there is a problem that is difficult to solve, it is necessary to contact the maintenance personnel of the equipment manufacturer for on-site maintenance in time to ensure the running state of the equipment, and pay attention to the teaching needs in real time to purchase new equipment to escort the teaching task.

3.3 The Establishment of Characteristic Teaching Materials Library

Featured teaching materials can help public art teaching and interactive technology effectively integrate, help teachers set effective teaching goals, and thus better help teaching work. First, collect and organize teaching resources. The establishment of a characteristic teaching material library requires the school to collect and sort out relevant teaching resources, including textbooks, teaching courseware, teaching cases, experimental instructions and problem sets related to interactive technology and public art. The school can obtain corresponding teaching resources by cooperating with teachers of interactive and public art majors, synthesizing excellent teaching cases and learning from the experience of other schools or institutions. Second, evaluate and screen teaching resources. The school should evaluate and screen the collected teaching resources to ensure their quality and applicability. The evaluation needs to include the teaching effect of the content and the innovation of teaching methods, and extract the commonness between interactive technology and public art teaching, so as to screen the teaching resources that meet the positioning and objectives of the characteristic teaching material library. Thirdly, design and organize the structure of teaching material library. Schools should design and organize the structure of the characteristic textbook database according to its orientation and objectives, which can be summarized according to students' different grades, teaching stages, practice and theory (Wu, 2021). Fourth, make and publish teaching materials. Schools can make the textbooks into electronic or paper versions, upload the related extended courseware by using network transmission technology, and open the download permissions of relevant personnel in the specialty, so that teachers and students can preview and review the content in advance. Fifth, continuous updating and improvement. The construction of textbook database is a continuous process, which needs to be updated and improved regularly to adapt to the change of teaching needs and the innovation of teaching methods. Schools can improve the newly changed textbooks with characteristics through teachers' feedback, students' evaluation and teaching research, and constantly improve the textbook database, thus ensuring the high-quality development of teaching work.

4. Conclusion

Generally speaking, reasonably inserting interactive technology into public art education can effectively improve the overall teaching quality, broaden students' artistic vision, and is of great significance to the comprehensive improvement of students' ability. Facing the problems of poor application rate, inadequate equipment preparation and unbalanced technology and subject content of interactive technology in public art teaching, colleges and universities should fully recognize the importance of interactive technology in teaching, increase capital investment for the purpose of meeting teaching needs, standardize teachers' behavior to help teachers improve their professional technical ability, and absorb advanced ideas in combination with the development needs of students in the new era to ensure the continuous improvement of teaching quality.

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