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The Practical Effect and Positive Influence of Mobile Art Apps in Online Education for Contemporary Art

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Abstract

This study explores the real effect and positive influence of the use of two mobile art apps, The Met and Artnet News, on online art practice on the basis of understanding their cognition of contemporary art development and art apps. The target group for this study is art college students affected by Covid-19 for online learning. The main goal is to determine the daily use frequency of college art students who use mobile art apps to learn online, as well as the cognitive status of college art students and the actual effect of using mobile art apps for online learning based on a comparison of the data from the two research groups and the control group. The researchers used a quantitative study design with a simple questionnaire survey distributed to 90 pre-university students to collect their cognitive state of modern art and frequency of use of mobile art apps. They were then divided into groups to compare the actual effect of these students after utilizing the mobile art app for further study with the test data to the group that did not utilize the online learning platform to obtain the final research results. Through specific data, this study not only reveals the understanding and cognition of art college students affected by Covid-19 on the current situation of contemporary art development, but it also encourages students to use mobile art apps to expand their theoretical knowledge reserve and apply it to the practice of contemporary art creation in addition to online classroom learning in colleges and universities.

Keywords: Contemporary Art, College Education, Online Learning, Mobile Art App, Positive Influence

Introduction

The covid-19 outbreak has had a significant impact on the learning techniques, research topics, and cognitive thinking among college art students. College art students in the pandemic area must acquire online education and work hard to finish the instructional responsibilities allotted to them by colleges and universities. Online extracurricular education is becoming increasingly significant in today's college education, and it is also involved in the field of contemporary art. Current art education must adapt to the rapid changes of the times, be close to and integrated into the daily lives of contemporary people and develop in a broad

and diverse path. According to Hongtu et al (2019), art college students can not only expand their knowledge reserves and exploration horizons with the help of extracurricular online learning platforms on mobile phones or computers, such as art apps in mobile phones, but also produce their unique views by using educational methods with emerging technologies and putting them into contemporary art practice.

Meanwhile, Maria et al (2011), contended that these mobile art apps provide greater reality and practicality in students' learning processes. Art students at colleges and universities can get sufficient knowledge accumulation, skill training, and art core literacy in addition to replacing the knowledge content missing in online education in colleges and universities. They can actualize the professional academic expression and the plasticity of creative life in the field of contemporary art by learning from the precipitation of learning and practical operation. Furthermore, Hao (2022) stated that, the knowledge wealth delivered to art college students by mobile art applications is not obvious to the human sight, but an autonomous style of thinking subtly formed during the learning process. We can gradually internalize the knowledge we have learned and build our contemporary art system through day-to-day appreciation, exchange, and understanding, to have a more comprehensive understanding of ourselves and the contemporary art that is constantly changing with the times, and to lay a foundation for future art practice (Edna, 2016).

Literature Review

In terms of the current development of contemporary art education, the eastern and western academic circles essentially share similar views and attitudes, and they share many things in common, such as agreeing that contemporary art should occupy a larger proportion of art education in colleges and universities and that it should be given adequate attention and gradually promoted through online learning platforms, such as mobile art apps, in the future. Simultaneously, both the East and the West have expressed their perspectives on how to treat, extend, and develop contemporary art in college education, as well as deal with changes in contemporary art outside of textbooks and extracurricular learning methods brought about by today's science and technology.

In Oriental academia, Liu (2019) stated for the first time that China's contemporary art education is under the dual pressure of reform, namely, a lack of in-depth research on the representation of contemporary art, the necessary reflection, and the conservatism and narrowness of the theme art concept of art education, which has become an impediment to the independent development of artistic thinking. As a result, he believes that learning techniques other than traditional courses at colleges and universities can encourage modern art reform. Meanwhile, China's Oriental contemporary art school has been unable to shake the impact of the Western art style in the last 20 years and even lacks self-style positioning and cultural thinking. To change the current scenario, it urgently requires supplementary learning techniques outside of the curriculum, such as electronic online education resources.

"The new media online art learning technique outside the university curriculum has unique theoretical significance in the spiritual life of college students and plays an important practical role in the future reform of current art education," wrote (Ma et al., 2021). As the primary source of contemporary art education, college students not only lack the ability to comprehend, comprehend, and appreciate the present state of contemporary art, but they

also nearly lose the ability to produce their own contemporary art. As a result, they can use multimedia technology to try to enrich students' learning channels.

These modern multimedia technologies can help students see and appreciate contemporary art more intuitively, extend their perspectives, and provide them with a variety of appreciating and creative experiences (Liang, 2021). Finally, Wang and Zhao (2021) agreed with their viewpoint from a different perspective, namely, to introduce contemporary art content from the online education platform in order to further improve the ideal effect of innovation and reform of art education in colleges and universities. It can also improve students' artistic literacy to promote self-development and growth.

Scholars in comparable subjects in Western academic circles hold similar ideas. To begin with, if college artists are disconnected from the transformation and development of contemporary art ideas and find it difficult to examine themselves with the vision of the times, as Brandstadter (2016) put it, "the artist does not know what he is doing, that he does not understand his art, nor how he produced it, nor its place in culture and history." At the same time, Jerome (2009) questioned parts of his previous experience with modern art education at colleges and universities, saying that his experience is both a tool and a trap. If his cognition is stiff, it will distort and mislead the future development path.

As a result, we should reconsider the current value of this information and expertise and demonstrate and infer the worth of using new teaching technologies outside of the classroom. As Illeris and Sattrup (2019) discovered in the last ten years of Danish contemporary art education projects for communities and universities, many of these projects were implemented in an informal environment outside the classroom, such as museum workshops, artists' independent research projects, and e-online education platforms, rather than the old-fashioned knowledge exploration links in the classroom, proving the practicability of extracurricular online learning.

Modern Extension of Contemporary Art Online Learning

The topic of contemporary art in today's college education is not confined to what is taught in textbooks. The theoretical knowledge and artistic practice of online learning in colleges and universities fall far short of the desired goals and abilities of art students in colleges and universities. In comparison to the natural learning environment of western contemporary art, contemporary art education in Chinese colleges and universities cannot foster students' Contemporary Art Literacy, appreciative vision, and creative capacity outside of the classroom.

Therefore, students should improve their appreciation, understanding, and internalization of relevant professional knowledge in their daily lives. Just like Huang Wei stated in his research debate, his knowledge is imperceptible and invisible. Once he has learned and absorbed these concepts, he can lay the groundwork for his students' cognitive abilities. (2020) At the same time, as the main body of art education in colleges and universities, we should not only focus on how to teach book knowledge to art students, but also allow students to pay attention to the extension and evolution of contemporary art outside classroom knowledge and their own exploration experience in the research process and practice their own theoretical research and artistic creation.

"The overall goal of the region was to experience that allowed participants — to gain greater knowledge of self," Wanda (2016) stated. Outside of the university classroom, students can connect, understand, and create modern art in order to form a theoretical framework with students as the core and establish a close relationship between students, the university classroom, and extracurricular online learning (O'Donoghue, 2015). We might as well look ahead and consider the impact of extracurricular online learning on art students in colleges and institutions.

On the one hand, Zhan (2021) stated that, students will have their own style of thinking, theoretical technology, and creative skills after relevant online additional learning, which will become an essential development manner of art education in the future. Judy's (2020) concept, on the other hand, fits with the former. She is certain that extracurricular supported learning can not only extend students' cognitive thinking, but also help them choose research methodologies that are appropriate for their own requirements and interests, so improving students' action capacity in practical operation.

The Use of a Mobile Art App in Contemporary Art Education

To begin with, we must acknowledge that online learning platforms, such as art applications that can be downloaded via mobile phones, have altered some of the behavior, comprehension, and cognition of college students in today's daily life. Simultaneously, they have fostered the development and reform of modern art learning, as well as its step-by-step online development (Liang, 2021). Second, since its inception, contemporary art has been unable to be imprisoned by book knowledge in college and university classrooms. Its concept and creative practice can be extended and transformed in natural labs such as art museums, big art workshops, and mobile apps.

In some circumstances, paying attention to contemporary art created by new things has a transforming effect on art students' practice and knowledge at colleges and institutions. As a result, the online learning platform not only serves as a new conduit for the dissemination of the most up-to-date contemporary art information and ideas, but it also reconfigures and plans the future learning path, presenting perspectives that are similar to those of today's contemporary art creation in its learning process (Dennis, 2012). In contrast to standard book knowledge in colleges and universities, today's art students in colleges and universities prefer and are better at grasping the theory and context of modern art using online learning platforms, according to Jeff's research (2003).

College art students can also use the online learning platform's promotion content to boost their opportunities to interact with contemporary art, allowing them to broaden their theoretical knowledge reservoir and apply it to the practice of artistic creation. Finally, in order to meet today's diverse challenges, meet the complex needs of the times, and seek new teaching methods, the modern online learning platform has gradually become a learning method that can meet this demand and occupies a greater proportion of future higher education with the global spread of Covid-19 and the increasing frequency of online teaching (Maria et al., 2011).

Practical Achievements of an Online Art Education Platform

Emerging online education and learning platforms have appeared in recent years on mobile phones, computers, and other electronic software, including certain mobile apps in the field of contemporary art, like the Met, DeviantArt, Pinterest, Artand, and Artnet news. These learning platforms demonstrate how art college students of various majors and interests have their own style, universality, fashion, and popularity. The major fundamental functions of most mobile art apps are to provide information, conduct social e-commerce, publicize exhibitions, and collect data.

They can also serve as a platform for artists, collectors, and art enthusiasts to admire works of art. Artists, college students, and teachers are not only participants and planners, but also reviewers and viewers of these mobile art apps. As Lu (2013) said that, "All artists and researchers from around the world were socially engaged in the virtual art dialogue by analyzing and commenting on the concepts, ideas, and means behind the work from their cultural perspectives." College art students can also use this chance to learn from one another, experience the allure and intellectual environment of contemporary art, and create contemporary artworks with a sense of self-perception based on a thorough comprehension of relevant research. College students can now use the mobile version of the online art learning platform to do their own research.

These students are drawn to the recent development of contemporary art and use internal observation and discussion to give their works worth and significance. Simultaneously, the art app for mobile phones will continue to inspire students to obtain new experiences through personal creative activities based on this understanding in order to create original pieces of art (Edna, 2016). Students of art at college must put their knowledge and talents into practice. When compared to traditional college and university textbook information, college art students' knowledge and creativity gained from mobile art applications may be directly translated into creative practice (Robert, 2017).

Methodology

The research was carried out in a quantitative approach. The research site is in a prominent art college in Beijing, China, which is home to some of China's best contemporary art research. The majority of the study's participants are 90 students who study contemporary art online. Simultaneously, the study will be carried out in two parts to obtain the study's actual effect in all aspects as much as possible. After conducting surveys about contemporary art, some students will be exposed to two mobile art apps that are used frequently in the field of contemporary art, and then they will be tested to determine the actual effect and influence of mobile art apps in contemporary art research and education.

The research must first determine art students' existing grasp of contemporary art development in colleges and institutions, to demonstrate the importance of boosting contemporary art education using a mobile art app. Multiple-choice questions and judgement questions will be used to construct the questionnaire. The questions include not only the fundamentals of modern art taught in college classrooms, but also the more in-depth concepts and interpretations of current contemporary art. Finally, the questionnaire survey will gather information on how friendly art applications are to students in order to uncover flaws in contemporary art education in colleges and institutions.

After that, the study will focus on the practical role and influence of mobile art apps. The investigation method will also conduct a two-month long-term segmented research, which will still be conducted in the form of quantitative research, due to the special requirements of the research issue. 90 art college students were placed into three groups for this study. The first group (n = 30) only received contemporary art education through online classrooms at traditional colleges and universities, whereas the second (n = 30) and third (n = 30) would download and use two art apps on their mobile phones, namely The Met and Artnet News, in addition to receiving college contemporary art courses, and maintain the same use time and frequency as far as possible.

To investigate the overall effect, an additional study of two groups of students using an art app was conducted, with nearly equal amounts of time and frequency for the two groups. This was done to ensure the accuracy and fairness of the survey method as much as possible and to reduce the generalization of results caused by a single individual. Finally, the average accuracy of the three groups of students' test questions about contemporary art will be counted one time at the end of each month, to verify the actual effect of the art app in promoting the development of contemporary art online education in colleges and universities. Two test questionnaires were employed in this research. Its content and internal structure have also been agreed upon by two contemporary art scholars.

Cronbach's alpha scores are 0.860, 0.887, and 0.915, respectively. The score has been proven to be effective and realistic according to Pallant's academic achievement test technique (Pallant, 2011). Simultaneously, researchers will do a descriptive analysis using one-way variance for specific data using the social science statistical software package (SPSS). Then, prior to executing the data analysis program, researchers will run data-related linearity tests, normality tests, multicollinearity tests, correlation tests, and outlier tests using Verma's data test approach (2019). In addition, researchers will perform several tests and factor analyses on the underlying structure of this study tool to determine its reliability and effectiveness. Finally, the researchers received 83 questionnaires and 176 survey test results after completing the questionnaire and survey test (89 in the first month and 87 in the second month). The remaining 7 questionnaires and 4 test surveys were eliminated due to students' subjective abandonment of the study and a lack of internal data.

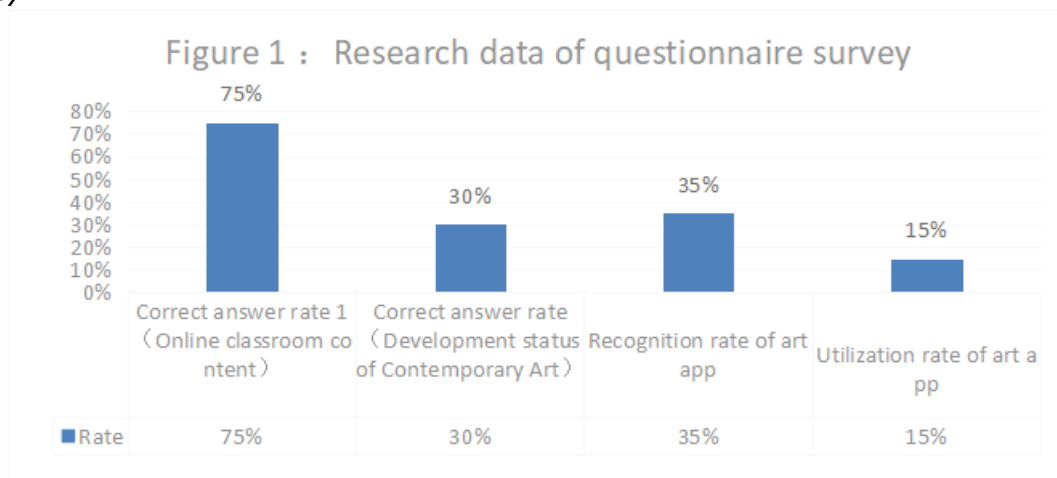
Results

Figure 1 shows that college art students in this major have a high mastery of classroom knowledge of contemporary art in the questionnaire survey, with an average accuracy rate (correct answer rate 1) of 75%. However, when it comes to the change and development of contemporary art ideas and creative practice, these students' performance is not as good, with an average accuracy rate (correct answer rate 2) of only 30%.

At the same time, the results of the survey show that the number of students who are aware of the existence of the current mobile art app with high international awareness is just over one-third, or 35 percent; the number of students who can download, use, and deeply study the app contents on mobile phones is only 15 percent. Thus, researchers generally understand that mobile art apps have an inseparable relationship with online learning of contemporary art based on the different performances of college art students on ordinary classroom content and current ideas in contemporary art, as well as the cognitive rate and utilization rate of mobile art apps.

Figure 1

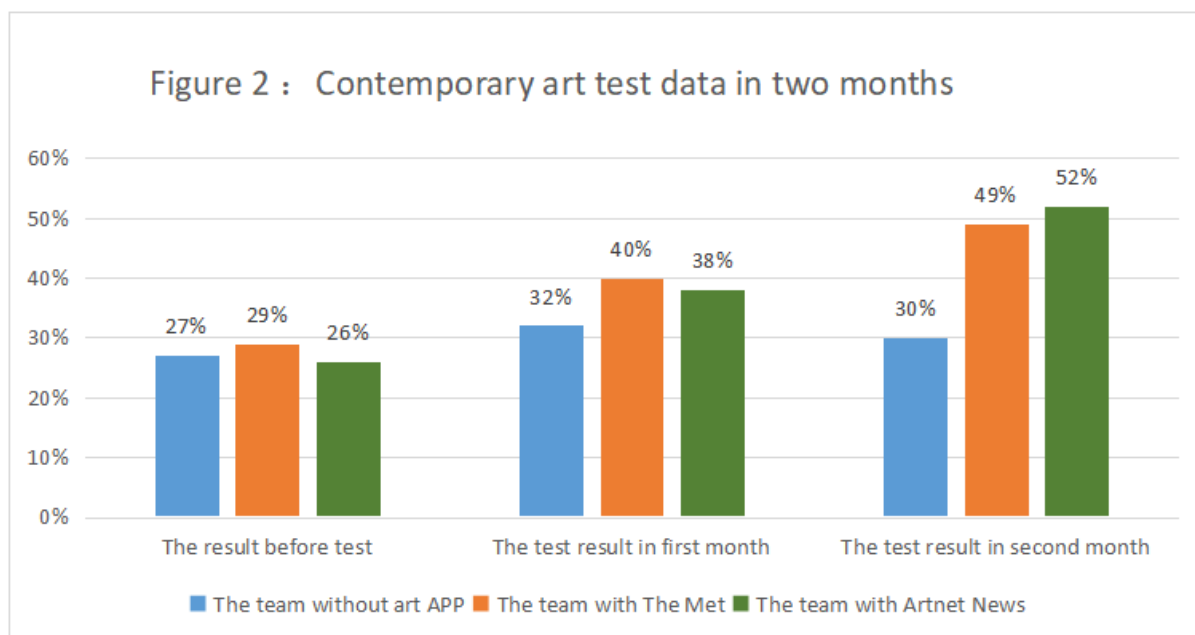
Analysis of correct response rate, APP cognition, and utilization rate in the questionnaire survey



Furthermore, when the two research groups undertook extra art app learning, the overall test data of the group that did not utilize mobile art apps remained rather steady, as shown in Figure 2. It can even be stated to be unchanged when compared to the changes in the other two groups, and the range of change remains within 3%. At the same time, when the other two groups of students study on The Met and Artnet News, the average exam accuracy is substantially greater than it was before the test, going from 29% and 26% to 49% and 52%, respectively. Even the team's test data from Artnet News in the second month is twice what it was before the test; the accuracy of the two groups can also maintain a steady rising speed, with a difference of no more than 3% between the two data increases. Second, because there is little difference in the average value of test data between two mobile art app individuals, it is impossible to tell which one is better in a short period of time; the research findings also show that using a mobile art app to improve students' contemporary art learning effect and test scores is very effective.

Figure 2

Analysis of data changes and actual effects of contemporary art test in two months



Discussion

Daily Use Frequency of Mobile Art Apps

First, a set of questionnaires was employed to look at the relationship between College Art Students' mastery of various levels of the contemporary art knowledge and the frequency with which they use mobile art apps in their daily lives. Only 35% of college art students have some awareness and understanding of mobile art apps, and only 15% of students use them regularly, resulting in a 45 percent gap in average question and response accuracy between the two groups. The data shows that the majority of students believe it is unnecessary to acquire the most up-to-date information about contemporary art in the classroom via the app, and that there is no need to keep up with current knowledge about contemporary art in the classroom. Some may argue that college art students just need to apply what they learn in the classroom, however, in the future, both contemporary art theory research and work creation will be tightly linked to the change and evolution of contemporary art outside of the university. This is due to the fact that mobile art applications have a close association with online classroom content that cannot be overlooked and can be reflected in daily use, such as:

- Learning tasks that are similar to or consistent with online college classroom content.
- Simple cross-disciplinary learning and social contact among students with the same major.
- Learning objectives that are explicit, professional evaluation, and content.

As a result, if these students lack appropriate professional understanding of contemporary art, they will undoubtedly feel uncomfortable or even bewildered in the face of recent changes in the substance of contemporary art as revealed by a questionnaire survey. At the same time, if these students do not frequently use mobile art apps, they not only miss out on the extension benefits and self-supplement opportunities of online classroom learning in

colleges and universities, but they also confirm the previous concerns of Eastern and Western scholars and educators about the current state of contemporary art development, according to the results of the questionnaire survey.

Practical Effect of Mobile Art App in Contemporary Art Education

During the Covid-19 outbreak, some college students are forced to study online at home and embrace current art education in colleges and universities, further weakening the original learning effect in regular colleges and universities. However, employing a mobile art app for supplementary learning can not only compensate for the shortage of teaching content in online classes at colleges and universities but also increase and expand college students' understanding of modern art and apply it to practice and theoretical artwork study. In other words, college art students choose to use a mobile art app as a supplement to their online classroom learning, which provides incomparable benefits over college online classroom instruction, such as:

- Direct access to contemporary art advice and materials.
- Promotion and promotion of online and offline art exhibitions.
- Clear contemporary art development direction planning.
- High-quality contemporary art creation practice and written discourse.
- Ease of use within the platform.
- Effective online communication between individuals and groups.

Under the conditions of nearly the same usage time and frequency, it is impossible to determine which of the two art applications is superior in a short period of time-based on the specific data analysis. It is impossible to predict which technology will become a favorite supplemental tool for online learning of college art students in the future. Since the difference between the two in the final actual test is so minimal, it has the same effect as the groups that used mobile art apps. As a result, the mobile art app can be regarded as a rather friendly online platform for college art students' online supplementary learning and creative practice, with full consideration given to its availability and usefulness in future classroom online instruction.

Unexpected Results

The major goal of this study is for 90 art students in colleges and universities to use and pick mobile art apps following online classroom instruction, and to extract research results from the comparison between the use and the selection results. The analysis, however, reveals that the actual effects of The Met and Artnet News Mobile Art applications on the two assessments of college art students are nearly the same, and none of the research data is particularly apparent, which has also become a completely unexpected outcome after data analysis. The internal functions and practical operation techniques of mobile art apps are approximately the same, according to the test findings of college art students during the two-month online learning session. They both enrich the online classroom learning content and broaden the path of students' art theory innovation and work product development. Throughout the research period, the changing trend and data contrast between contemporary art test results demonstrate that a mobile art app can assist students in dealing with the recent development trend of contemporary art as well as the changed contents in college classroom teaching in today's complex learning environment.

Limitations

Two drawbacks should be highlighted in this investigation. To begin, the popularity of contemporary art education is related to the level of urban growth, the process of social art rising, and students' self-cognition and understanding. Furthermore, because of the influence of Covid-19 and the limits of online teaching areas in colleges and universities, the investigation and site selection of the research site is quite difficult. The majority of research sites are located in more developed countries or cities. Although the basic conclusion will be nearly the same as this research under two limits, the individual research data will change according to the local level of contemporary art development and epidemic management, revealing a new specific internal structure and change trend.

Conclusions

The early stage of the study's questionnaire survey reveals that online education in colleges and universities affected by Covid-19 has limits, which deepens the gap between the development of modern art and art students. College art students' cognition and comprehension of the development of contemporary art concepts is relatively low, leaving contemporary art ideas nearly entirely out of these students' daily lives and cognitive vision.

At the same time, research data show that its current situation has a critical link with mobile art apps, because the latter can not only compensate for online classroom content of colleges and universities, but also broaden their learning horizons and find a new way to cultivate their artistic literacy and understand contemporary art. Furthermore, particular data from the study's latter stages demonstrate that a mobile art app, as an extracurricular online learning technique, is beneficial to college art students' concept research and practical expression of modern art.

The positive test results also demonstrate the test's influence on these students' future contemporary art output. Furthermore, the total research data suggest that the difference in real effect between The Met and Artnet News is negligible in similar using frequency and using time, proving that the use functions and actual effects of different mobile art applications are about the same. It is possible to conclude that a mobile art app will have an upward and ongoing good impact on college art students as a whole, and that it will be accepted by college art students in a short period of time.

Finally, this study has several implications for college educators, such as students being encouraged to use mobile art apps as an additional contemporary art learning tool; it can also be integrated into online classroom education to fully communicate with students online and have a positive impact on art education that traditional teaching modes cannot. Teachers can also use the latest information and multiple functions in these online learning platforms to enrich themselves, incorporate changing and developing contemporary art concepts into the teaching process, and ensure that college and university classroom content about contemporary art is up to date. Therefore, mobile art apps may be employed as an extension of contemporary art online education in the future to expand and enrich the contemporary art research system and give more knowledge reserves and learning resources for art students and scholars in colleges and universities.

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