# A brief discussion on the development and reform of college art major in the digital age

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**Abstract:** *At once, with the rapid development of Internet, 5G, big data, artificial intelligence, virtual reality, etc., education informatization and digitalization have become a trend, and the state vigorously promotes the process of education informatization and digitalization. The trend of digital education transformation is both a challenge and an opportunity for the development of art teachers' teaching ability. In order to highlight the uniqueness of college art in digital education, art teachers need to master and apply scientific methods and means, and actively explore the promotion of teaching content, educational methods and educational ability in the new digital technology.*

**Keywords:** *Digital age; Fine arts major; Colleges and universities; develop*

## 1. Introduction

In 2020, the Ministry of Education issued the Guidelines for Ideological and Political Construction of Curriculum in Colleges and Universities, which pointed out that college teachers should be good at using modern information technology, teaching digitalization and various online training centers to improve teaching ability. The Key Work Points of the Ministry of Education in 2022 put forward strategic actions for the implementation of education digitization, requiring innovative education and learning methods and improving the level of education digitization governance.[1] In order to adapt to the development of modern education, as the leader and executor of education, digital transformation of education is necessary, and art teachers have to change their ideas and methods to follow the digital development. As the hope and backbone of the future development of the country, college students' professional quality and ability can adapt to the new changes in social development, and it is crucial to combine the applied reform of fine arts. At present, there are few researches on informatization and digitalization of fine arts specialty in colleges and universities. The 2024 Deployment Meeting on the Construction of Teachers by the Ministry of Education requires the implementation of digitally-empowered teacher development actions, and continues to require college teachers to improve and use digital capabilities to serve teaching. Therefore, starting from the development process of education informatization to digitalization, starting from the teaching of art teachers, the paper puts forward a plan for the digital teaching content and methods of art majors, hoping to provide some references for art teachers.

At present, with the rapid development of science and technology, Internet, 5G, big data, artificial intelligence, virtual reality and other rapid development, education is also undergoing great changes, with the improvement of national information technology, education information and digitalization rapid development, network and intelligent environment change the traditional teaching methods, education information and digitalization has become a trend. The state vigorously promotes the implementation of education informatization and digitization in the education system.

## 2. The development process from education informatization to education digitization

Since the Ministry of Education began to issue the "Tenth Five-Year Plan (Outline) for the Development of Education Informatization" in 2002, it has begun to attach importance to the development of education informatization in China and put forward that "education informatization is the basis for realizing education modernization and leapfrog development." In 2008, the General Office of the Ministry of Education set up a special education informatization Work Office, and then set up a survey to 2010. From 2011 to 2023, education informatization has issued 105 planning and related policy documents (Figure 1), an average of 8 times a year, including 25 times of official document notifications

(Table 1). From the era of education informatization 1.0 to the era of education informatization 2.0, the development of national education informatization is constantly changing in the changing times. [2]
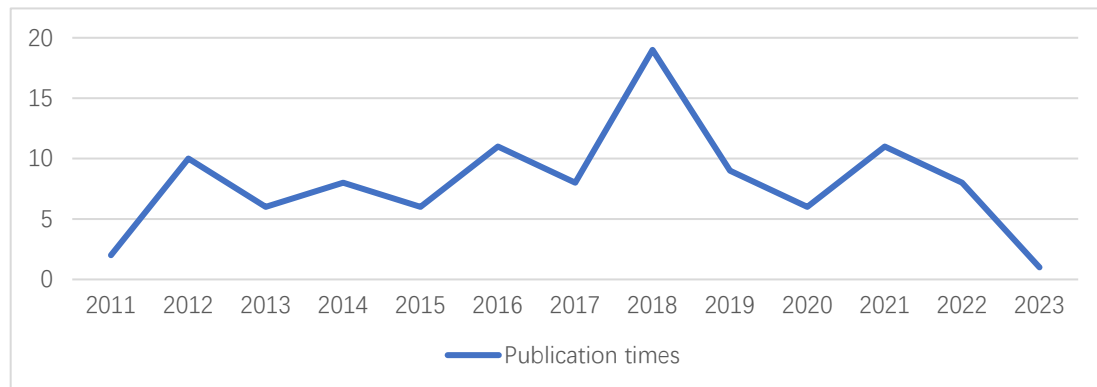


*Figure 1 Annual release times of educational informationization related policy documents*

*Table 1 Document notice issued by education*

| A given year | Notice of issuance of documents |
|---|---|
| 2011 | "Education Management Information (Series) Standards (Draft for Comment)" |
| 2012 | "Ten-year Development Plan for Education Informatization (2011-2020)" |
| 2014 | "Guidance on Security Classification of Information System in Education Industry (Trial)", "Establish an implementation plan for an effective mechanism to expand the coverage of high-quality educational resources by means of information technology" |
| 2015 | "Key points of education informatization work in 2015" |
| 2016 | "Key points of education informatization work in 2016", "Interim Measures for the administration of educational informatization projects", "Education informationization '13th Five-Year Plan'" |
| 2017 | "Key points of education informatization work in 2017", "Education Informationization Special - Education Business Management Information System sub-project management Rules (trial)", "Measures for the management of the demonstration project for the construction of a first-class network security college", "Basic education teaching resource metadata" A series of education industry standards |
| 2018 | "Education informationization 2.0 Action Plan", "Guide to the construction and application of network learning space", "Code for Digital Campus Construction in primary and Secondary Schools (Trial)" |
| 2019 | "Key work points of education informatization and network security in 2019", "Administrative measures for the filing of educational mobile Internet applications" |
| 2021 | "Code for Digital Campus Construction in Colleges and Universities (Trial)" |
| 2022 | " Teacher digital literacy"," Digital educational resource base classification code"," Two smart education platform series","Education Basic Data"and other three education industry standards," National Smart Education Public Service Platform access management standards (trial)"," National Smart Education Platform Digital Education Resources content review standards (trial)" |
| 2023 | " Security Requirements for live online teaching Platforms"education industry standards |
| totality | 25 |

Among them, 2018 issued the most notices, 19 times, according to the "education informationization 10-year Development Plan (2011-2020)", "Education informationization" 13th Five-Year Plan and other documents to develop the" Education informationization 2.0 action Plan "issued in this year, 5 years past, the pace of education informationization continues to move forward. Over the past decade, great changes have taken place in the development of educational informatization, including the construction of educational network platforms, the integration of information technology and intelligent technology into education, and the sharing of educational resources and services, and great changes have taken place in educational methods and applications. Education informatization is becoming more and more popular, there are 5 information education industry standards issued in 2022 and 2023 to standardize the education

system and ensure safe teaching operation. There are some problems in the process of education informatization, and the country makes corresponding normative provisions on these problems to manage the positive operation of education.

The ultimate goal of educational informatization is to provide information technology to help teaching and learning problems, develop innovative ability combined with application practice, promote teachers and students' professional quality, and adapt to the needs of social development. Education informationization is still in progress, and digitalization has entered people's field of vision. Around 2020, digitalization has become popular, and digitalization is an advanced stage of informatization. In 1996, Massachusetts Institute of Technology professor Negroponte put forward the concept of "digitalization" in his book Being Digital. Human beings use digital technology in virtual and digital space to engage in information dissemination, communication, learning, work and other activities, which is digital life. [3] Today, digital applications are used in every aspect of our lives, such as ordering food delivery, attending courses remotely, visiting museums online, etc., and the way of education is also changing.

At present, the digital transformation of education in our country is still in the initial stage of exploration, and a perfect paradigm has not yet been formed.[4] The website of the Ministry of Industry and Information Technology released the "5G Application 'Sail' Action Plan (2021-2023)" to create "5G+ smart education" in the field of social livelihood. The development of digital technology will inevitably promote the digital construction of education [5]. At present, it is a challenge and opportunity to use the trend of digital transformation in education to promote the development of teachers' teaching ability.

## 3. Development and change of digital education of fine arts major in colleges and universities

In 2021, the Ministry of Education issued the Guiding Opinions on Promoting the Construction of New Education Infrastructure and Building a High-quality Education Support System, which requires the use of artificial intelligence and other technologies to boost the construction of teachers and help improve professional abilities such as management and teaching. To put forward the requirement of "improving the professional quality and ability of teachers" in the construction of teachers in the new erais the key to accelerate the process of education digitization. [6] Teachers are the key implementers of students' education, the main body of digital transformation of education, and the guide of students' learning and life. Under the guiding ideology of "student-centered", education serves students, and students' mastery of digital media affects their future development.

At once, adapt to the development of The Times, in the background of the digital era, art teachers should adapt their teaching content, educational methods and educational abilities to The Times. Art teaching and practice complement each other, and art teachers are required to master and apply scientific methods and means to cultivate the education model with network technology as the medium. With the development of information technology for more than ten years and the promotion of online teaching for three years during the epidemic, digital technology has developed rapidly, and the digital age is an inevitable development trend. This kind of development can not only promote the development of art teachers' teaching ability, but also an opportunity for teachers' development.

With the rapid development of the digital era, mobile phones, computers, networks and artificial intelligence play an increasingly important role in human life. Science and technology change the world. Under the background of digital education, people's learning styles have undergone great changes, such as ubiquitous and borderless network learning, and the display of digital technology has become convenient, simplified and intuitive. The increasing role of digital technology in the development of teachers' competence is reflected in the following:

(1) Use network platform to manage teaching, and use big data technology to directly generate teaching evaluation and feedback to reduce teachers' work; With the help of AI technology, teaching copy integration appears, teaching plans are imported into AI to directly generate PPT courseware, saving teachers time in making PPT; The rich teaching, scientific research and cultural resources on the Internet provide massive and suitable learning resource services for all kinds of schools at all levels and all learners, and provide rich teaching content and information for teachers and students.

(2) Education and teaching auxiliary technologies represented by digital multimedia, 5G, virtual classroom and other technologies have been initially applied to art teaching practice in colleges and universities.

(3) Platform assistance, there are Super star learning, rain class, MOOCs online courses (MOOC), small-scale personalized online courses (SPOC) and other platforms, on the basis of previous audio-

visual education and distance education, improve the network learning mode, real-time interaction, presence and other technologies are getting better and better.

The State Council issued a notice on the development plan for a new generation of artificial intelligence, with a vision to develop intelligent education by 2030 and take the initiative to respond to new opportunities and challenges brought by the wave of new technologies. The ability to develop and serve digital education resources is not strong, the level of construction and application of information learning environment is not high, teachers have the basic ability of information technology application but the innovation ability of information teaching is still insufficient, the deep integration of information technology and subject teaching is not enough, and high-end research and practice talents are still in short supply. [7]

At present, there are also some problems in digital teaching of art teachers.

(1) The development of big data, artificial intelligence, AI algorithm and other technologies in the digital era is very advanced, but it is rarely applied to the practice of college art education, and the teaching ability of college art teachers is not greatly developed for the time being. For example, Jason Allen's AI oil painting "Space Opera" won the highest prize in the art competition of the Colorado State Fair, but in reality, AI technology is rarely used in China, and teachers do not use it in art teaching.

(2) Digital education in the primary stage has not formed a unified information resource system and ecological teaching system, and there are many shared online courses such as "national excellent courses" and many platforms, and the practical application and promotion of art teachers are lacking, resulting in the limitation of the use of educational information. For example, local characteristic courses "traditional Thangka techniques", "New Thangka creation" and "Decorative art" can rarely find corresponding course resources.

(3) Digital technology provides education with easy to understand and intuitive teaching content and convenient teaching methods. For more personalized local courses, information and data are relatively poor.

(4) Digital teaching of art education weakens the sense of interactive experience between art teachers and students, resulting in less humanistic care.

(5) The heavy work of art teachers' education, coupled with the learning and exploration of digital technical tools and software content, make college teachers have greater mental pressure, such as course video shooting, editing, parameters, specifications, use environment and other technical content.[8]

These problems need to be solved, and highlight the uniqueness of college art in digital education, we must continue to think and explore educational digital technology, need to get support from the school's upper management and technical level, and work together to face the problem and solve the problem, in order to jointly face the next educational reform.

## 4. Digital practice transformation of fine arts education in colleges and universities

Traditional art education mainly relies on teachers to impart knowledge, and art learning is carried out through practical operations such as painting and hand-making. With the development of emerging technologies such as digital media and artificial intelligence, the education mode of fine arts majors in colleges and universities in the digital era is facing changes. Fine arts in the digital era have stronger innovative, communication and technical characteristics, and knowledge in the digital era shows a big explosion development trend, and knowledge and skills are diversified. [9]

As the leader of education and teaching, the first thing to solve is the digital teaching ability of teachers. Teachers plan teaching as a whole, absorb various educational forces and methods to achieve educational goals, actively learn and train the application of digital educational technology, enhance teachers' teaching ability, and jointly cope with the current digital era with students.

(1) In terms of teaching content, online platforms and shared network platforms are used to obtain more abundant resources, such as online open courses such as B station, MOOCs, good-looking videos and Little Red Books. There are a large number of famous paintings in online digital museums and galleries, and through the guidance of real 3D images and museum staff, you can get access to art works in various galleries and museums, and broaden your artistic literacy. Online artist community Learn about the artist's creative process and style, and students can access a wide range of art works, art history knowledge and learning resources anytime, anywhere.

Digital art teaching can also use VR virtual reality, artificial intelligence and other ways to further expand content sources, such as: Art curators of the School of Fine Arts of Sichuan University use VR art galleries to carry out courses, provide immersive learning experience and feedback mechanism, stimulate students' imagination, help students better grasp the process and requirements of art curating and arranging, and connect with cutting-edge, emerging and effective art content more conveniently. Photography, mobile phones, computers, Internet and other new media technologies enrich teaching methods, broaden the channels of artistic expression, and stimulate students' creativity and learning interest. With the help of digital audio, video and other technologies, we choose and optimize related art teaching content.

(2) In terms of teaching methods, the platform supports: Super Star Learning, Rain Class, MOOC online courses (MOOC), small-scale personalized online courses (SPOC), etc., providing opportunities for independent learning and personalized learning, and cultivating independent learning ability. With the help of platform information technology to comprehensively evaluate students' learning situation, the evaluation feedback is more convenient. Interactive learning mode breaks through the traditional face to face of college art and the integration of virtual reality and other technologies, so that multi-dimensional intuitive demonstration and virtual space exhibition can break the time and space restrictions, save material costs of repetition and trial and error, and further improve the scientific and targeted teaching methods.

Art is a visual and creative discipline, which is closely related to the development of digital technology, and the methods and means of art education must adapt to The Times and constantly transform. However, the direct object of education is the individual life, and the role of teachers in it is beyond doubt. Teachers' on-site guidance and artistic perception have the uniqueness of the discipline. How to perfectly integrate offline and online digital teaching needs to continue to seek experience in practice.

## 5. Conclusion

The State Council issued a notice on the development plan of a new generation of artificial intelligence, and the vision is that by 2030, the development of intelligent education and digital education must continue to move forward. Multimedia courseware, online learning system, virtual classroom and other digital technology teaching tools provide more abundant teaching methods and means for classroom teaching and bring more possibilities for classroom teaching. However, the diversity of knowledge and skills challenges the ability quality of art teachers in colleges and universities. Digital education technology and means need to be upgraded in the transformation. Art teachers need to master and use scientific methods and means to actively explore the improvement of teaching content, education methods and education ability in new digital technology.

## Acknowledgements

## References

[1] Yuan Zhenguo. Educational Governance from the perspective of Digital transformation [J]. China Education Journal,2022(8):1-6,18.
[2] The Ministry of Education. Education Informatization Planning and related policy documents [EB/OL]. http://www.moe.gov.cn.
[3] Nicholas Negroponte. Being Digital[M]. Knopf. 1995.01.31.
[4] Zhu Zhiting, Hu Jiao. The practical logic and development opportunity of Education Digital Transformation [J]. Research on Audio-Visual Education, 202, 43(1):5-15.
[5] China Government net.5G Application "Sail" Action Plan (2021-2023) [EB/OL]. (2021-07-05) [2021-07-14]. https://www.gov.cn/xinwen/2021-07/14/content_5625001.html.
[6] Ministry of Education. The Ministry of Education and so on six departments on strengthening the construction of new era college teachers reform guidance [EB/OL] (2021-01-27) [2022-09-01]. //

*www.moe.gov.cn/srcsite/A10/s7151/202101/T2021108_509 152.html.*

*[7] Under the State Council. The State Council about the notice issued by a new generation of artificial intelligence development planning: the country is sent [2017] no. 35. [EB/OL]. (2017.07.20). http://www.moe.gov.cn/srcsite/A08/s7056/202006/t20200603_4624 37.html.*

*[8] Liu Yucai, Li Lehu. The Development of Teaching Ability of public teachers in colleges and universities under the background of Education Digitization [J]. Journal of Physical Education,2024,40(01):40-45. (in Chinese)*

*[9] Qian Chuxi. Art Education in the Era of Big Data [M]. Shanghai Education Publishing House,2017.06.*