Research on the Development Trend of Western Art History Based on Big Data Technology

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Abstract: With the development of the times and the progress of society, the level of human science and technology and culture is constantly improving. A large number of science and technology are widely used in people's daily production and life. Under the background of the current big data era, the development of all walks of life in China is carrying out innovation and Reform in order to meet the requirements of the times. The research on the development trend of Western art history also needs to follow the trend of the times. Compared with the past, great changes have taken place in the research methods of the development trend of Western art history. In order to cope with this change, this paper puts forward the method of integrating big data technology with the Research on the development trend of Western art history, and divides the research status quo of the development trend of Western art history Based on the new requirements of the big data era on the development trend of Western art history, a new research scheme for the development trend of Western art history is formulated. Through long-term research and observation, we can find that some analysis methods proposed in this paper have important practical significance for the research methods of Western art history development trend based on big data technology.

Keywords: Science and Technology, Big Data Technology, Western Art, Development Trend

1. Introduction

At present, the era of big data [1-3] is an era based on data collection and processing and intelligent data processing based on network platform. Each of us is in this era, and everyone's behavior and performance is not only the basic data of data processing, but also the objective reflection of the
characteristics feedback of the data age to individuals. At the same time, in this process, everyone is required to have the ability to identify, refine and identify, make full use of the convenience brought by the big data era, and try to avoid the negative impact of the big data era. In the era of big data, all kinds of details flow into all fields of life and production and fully integrate into social life, which also brings new opportunities and challenges for higher education reform.

Western art plays an important role in the long history of human civilization. For thousands of years, the development and evolution of Western fine arts have left a large number of masterpieces of painting, carving and Architectural Arts in the history of human art [4-6], and many outstanding and famous art masters have made indelible contributions. The development and prosperity of human spiritual civilization has also attracted many scholars to study Western art, And wrote the history of many masterpieces of art. Aristotle, the great Greek philosopher, wrote in the beginning of Metaphysics: "it is human nature to seek knowledge." Similarly, we should also have an understanding and study of this western art history [7-8]. Especially in the research method, only the correct method can get twice the result with half the effort, so that we have time and energy to learn and create things.

This paper studies the research method of Western art history development trend [9-10] Based on big data technology. The development of the times has brought great impact to all walks of life, making all walks of life have to carry out reform and innovation to meet the new requirements of the new era. Compared with the past, great changes have taken place in the research methods of the development trend of Western art history. In order to cope with this change, this paper puts forward the method of integrating big data technology with the development trend of Western art history, analyzes the research status quo of the development trend of Western Art History, and combines with the new requirements of the development trend of Western art history in the era of big data A set of new research programs on the development trend of Western art history has been worked out. Through long-term research and observation, we can find that some analysis methods proposed in this paper have important practical significance for the research methods of Western art history development trend based on big data technology.

2. Research Methods of Western Art History Development Trend Based on Big Data Technology

2.1 Big Data Technology

Big data makes it possible to investigate students' achievement and learning path information. Students learn through online learning platform, and their learning behavior data will be recorded. The background of the system evaluates the students according to the accumulated behavior data, analyses the students' thinking habits and thinking modes, creates a psychological measurement chart, and adjusts the learning content and key points according to the students' learning progress. Real time recording of students' quantitative learning process (classroom, reading, notes, homework, discussion, examination, evaluation, etc.) and experimental process results, these data will be used as an important reference for the final evaluation of the course. By focusing on data analysis, teachers can study students' learning situation and learning effect more effectively.

2.2 Research on the Development Trend of Western Art History

We find that in the whole history of Western art development, it is not the history of technological
level, but the history of changes in concepts and requirements. Therefore, in the research methods of Western art history, we should pay more attention to this history. We can see that there are many periods in the history of Western fine arts, especially the period of the rise of Greek art. Since the time of Giotto, Europe has been striving to innovate. Artists seem eager to surpass their predecessors and teachers. They often use scientific knowledge, such as the discovery of perspective, to improve the technology of imitating nature. Therefore, the story of Western art is a story of constant experiment, a story of pursuing unprecedented novelty and original effect.

3. Experimental Correlation Analysis

3.1 Experimental Background

From the initial introduction of Western painting to the introduction of the concept of "art history", and then to the establishment of the discipline of art history consciously, it cannot be said that it is a long process, and the western art history was introduced into China in this arduous process. As we all know, there were two peaks in the introduction and research of Western art history in China in the last century, which were the 1920s and 1930s after the establishment of the Republic of China and the 1980s and 1990s after the reform and opening up. Especially in the first half of the century, the academic predecessors translated a large number of Western art history materials.

3.2 Experimental Design

At present, there are a lot of researches on the history of modern art, but most of them focus on the study of Chinese art history, and the research results of Western art history are less. By consulting relevant works, master's thesis and HowNet, we can find that some works and papers will involve a small amount of elaboration on the translation and introduction of Western art history in the period of the Republic of China. The results are shown in Table 1.

| title                           | translator     | source language |
|---------------------------------|----------------|-----------------|
| History of Western painting     | Chen Zhifo     | Japanese        |
| The history of modern French painting | Xu Xingzhi  | Japanese        |
| Introduction to modern art history | Zhao Shiming | Japanese        |
| Introduction to Western Art     | Chen Zhifo     | Japanese        |
4. Discussion

4.1 Analysis of the Research Status of the Development Trend of Western Art History Based on Big Data Technology

In the 1920s and 1930s, painters continued to learn painting and theory from the West. The huge objective difference between Chinese painting and Western painting also prompted them to re-understand and discuss their own traditional Chinese painting. In the creation, they try to inject the theoretical content of anatomy and perspective of Western painting into their own creation, and absorb western painting techniques, so as to give new space to the theme and theme of Chinese painting. Therefore, the academic debate on the inheritance and development of Chinese painting has always been lingering in the sky of the Republic of China. According to the statistics of the number of national art associations in this period, the statistical results are shown in Figure 1:

![Figure 1. Statistics of the number of art associations in China](image)

As shown in Figure 1, it is not difficult to see that the regional distribution of art associations during the Republic of China showed the basic characteristics of taking Beijing and Shanghai as the center and facing all parts of the country, and showed the characteristics of uneven distribution. It can be seen from the above figure that the number of art associations accounts for more than half of the total number in China's southeast coastal areas, while art associations in Shanghai, the commercial core of the southeast coastal areas, is almost the largest, accounting for about one third of the total.
This shows that the frontier of the development of Western art history in China is in the southeast coast and other economically developed and trading ports. This has laid a solid foundation for the research on the development of Western art history in China.

From 1978 to the end of the 20th century, there was an unprecedented "blowout" in the study of comparative literature between China and Japan, while the Comparative Art Research between China and Japan did not show an exciting development momentum. Facing the strong impact of western modern culture, researchers tend to pay more attention to the Western Fine Arts with obvious differences and huge differences, and often ignore the research on the relationship between different cultures and fine arts in the same cultural circle. This paper examines the number of research papers on the development of Western art history in China, the survey results are shown in Figure 2:

![Graph](image)

**Figure 2.** The number of research papers on the development of Western art history in China

As shown in Figure 2, it is not difficult to see that the recent research trend of Western art history in China is relatively fierce. Generally speaking, with the promotion of various forces in Chinese society and the unremitting efforts of several generations of scholars, China has made progress in the study of Western art history to a certain extent. Looking back at the research on the history of Western art in China in the 20th century, we can find that the changes in the 1980s, compared with the rare achievements in the early stage, increased significantly in the later period. However, the difference between less and more is only a description of the number of studies. When we ask about the quality of research, we find that "quality" and "quantity" do not match. Comparing the present situation of the study of Chinese Western art history and looking forward to the future of the study of Chinese
Western art history, we cannot but think about the direction of China's research on the history of Western art.

4.2 Suggestions on Research and Development of Western Art History Based on Big Data Technology

The research methods and purposes of Western art history are different from those of Chinese traditional art history: for more than 1000 years, the writing of Chinese traditional art history has been using description, evaluation and other methods in order to enlighten and inspire the artistic creation of later generations. However, although the study of art history in foreign countries (especially in Europe) started relatively late, it soon stepped out of the stage of traditional history, and the research methods gradually changed from analysis to synthesis, integrating various methods such as paleontology, iconology, psychology and sociology. This paper attempts to expand and infiltrate other disciplines from the perspective of art history, so as to reveal human ideology and culture more profoundly.

The study of Western art history is not an isolated development process. It is closely related to the western humanities. This connection has been fully reflected from the beginning of Western art history research. For example, the relationship between Renaissance historical research and humanism, especially in the value evaluation system, has been maintained. Among the relations between art history research and various schools of thought, the relationship between art history and philosophy is particularly important. Especially since the 18th century, aesthetics has been playing a more and more important role in academic research. The connection between art history and philosophy has become a more stable bridge.

Abstract is an important feature of Stylistics in Western art history. The study of style in Western art history mainly includes the necessity of stylistics, the content of stylistics, the content of stylistics and the study of the heart of stylistics. From these contents, we can see that western art history stylistics covers a wide range of professional knowledge and disciplines. Starting from the internal relationship between human ideology and psychology, this paper demonstrates the relationship between western art history and history and the scientificity and rationality of its existence. Stylistics of Western art history exists not only in the field of painting, but also in sculpture, architecture and design. For example, one of the artistic expressions of Chinese painting is "white as black". In the design of landscape architecture, a blank space is deliberately left to convey rich, through emptiness, so as to achieve the needs of the landscape for human use, to give the audience a profound artistic conception and endless aftertaste. The composition of Chinese painting is consistent with the style of modern landscape design. The elements of Chinese painting are applied to landscape design to create a sense of three-dimensional, causing a variety of sensory resonance. In addition, in the research process of Western art history, many artists use the method of style, and their research further promotes the development and perfection of stylistics.

From the perspective of domestic research, most of the discussions on the compilation of Western art history textbooks are the result of translation of foreign art history. With the exchange of Chinese and Western art and culture, the history of Western art and culture was introduced into China, and then into China. With the deepening of people's understanding and learning of Western art, western art and Western art history methodology are more and more used in China's education and teaching. Since the establishment of the discipline of art history in Colleges and universities, the study of Western art
history has become a trend, and a large number of art scholars have arrived. Therefore, the compilation of Western art history textbooks plays an important role in the study of Western art education. However, the compilation of Western art history textbooks is not satisfactory. The form and content of teaching materials are similar, and the compilation of teaching materials has begun to fall into the bondage of various "teaching material models".

Our research on the history of Western art is not ideal. Art itself is often subtle and indescribable. It's not a science; it can be quantified and measured. In addition to the boundary of time and space, there are some cultural differences between western art history and us. How to maintain the understanding and balance of cultural mentality has become an important prerequisite for the study of Western art history. To be sure, it is impossible to study this subject well because of impulse and greedy desire. In addition to being calm and willing to be lonely, we should accept the differences between Chinese and foreign cultures and arts with a more inclusive understanding attitude, and be good at finding the balance between them, so as to better grasp the development of this discipline.

5. Conclusions

This paper introduces the research methods of the development trend of Western art history based on big data technology. With the continuous development of the times, the new requirements of the new era are encouraging all walks of life to carry out reform and innovation. The new development modes of all walks of life are constantly changing. Compared with the past, the research methods of the development trend of Western art history have also changed greatly. In response to this change, this paper puts forward the method of integrating big data technology with the research on the development trend of Western art history, analyzes the research status quo of the development trend of Western art history, and formulates a new research scheme for the development trend of Western art history combining with the new requirements of the development trend of Western art history in the era of big data. Through long-term research and observation, we can find that some analysis methods proposed in this paper have important practical significance for the research methods of Western art history development trend based on big data technology.

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