Development and Implementation Strategy of Students' concept Innovation in Chinese Painting Teaching Based on Big Data

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Abstract. With the progress of science and technology, big data technology has penetrated into all aspects of life. The topic of this paper is how to develop students' concept innovation and learn to learn in Chinese painting teaching under the background of big data, mainly focusing on how to develop and guide students' concept change in their activity process. This paper uses the research method of case analysis. The research object is the students of a university in our city. I get the necessary data through the questionnaire survey data collected before the course, the communication data with students after class and the creation of works of two parallel classes. Then the questionnaire answers to the data list, after class talk statistics, comparative description and analysis of students' works. The purpose of this paper is that through the practice of Chinese painting, students can learn to learn, use their brains spontaneously, improve their ability of autonomous learning and innovative ideas, and make different works. Teachers can use their own knowledge and creative experience and Research on the implementation strategy of Chinese painting class to improve their ability to better guide students' concept innovation.

Keywords: Chinese Painting, Concept Innovation, Big Data, Concept Development

1. Introduction
Chinese painting teaching is one of the main ways of quality education in schools. Since modern times, China's art teaching has been influenced by the west, sketch, color and other courses have become popular today, art college entrance examination is also based on Western painting, so in the junior high school students pay more attention to these examination subjects. With the passage of time, Chinese painting is becoming more and more formalized in teaching, focusing on completing the task. The "quintessence of Chinese culture" inherited by the industrious and intelligent ancients of our country is more and more eclipsed. Especially in rural schools where teaching conditions are relatively backward, students have little chance to come into contact with traditional Chinese painting, which is usually displayed in the form of appreciation class in art books. The traditional teaching of traditional Chinese painting is mainly based on teachers, and the teaching method is single. Often can not raise the interest of students, students know little about traditional Chinese painting [1].

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In 2003, the general high school curriculum plan (Experiment) put forward: "in teaching, we should combine the knowledge and skills of other disciplines in the period of 7-9 years, and use a variety of art media, methods and forms to teach." "We should integrate music, Chinese, foreign language, history and society into teaching." The new curriculum standard of fine arts also mentions: "understanding Fine Arts in a wide range of cultural situations". That is to say, when appreciating art works, we should adopt a variety of methods to let students appreciate and create traditional Chinese painting works in a unique cultural context. "Full time compulsory education fine arts curriculum standard (experimental draft)" divides junior high school fine arts into four learning fields: "modeling, performance", "design, application", "appreciation, exploration". Students are required to "understand the relationship between fine arts and traditional culture and environment, record, plan and produce by means of Fine Arts: through interdisciplinary learning, in our country, there are many research cases about the integration of art teaching and other disciplines. For example, in the article "Teaching Research of junior high school art and Chinese painting appreciation course" by Li Zhuo, a student of Inner Mongolia Normal University, in view of the single teaching method of Chinese painting, this paper puts forward that the teaching of Chinese painting appreciation course is related to Chinese, history, music and information technology [2]. Dou Li, a master of Tianjin Normal University, discussed the integration of traditional Chinese painting teaching and other disciplines through the analysis of the teaching practice of traditional Chinese painting in his essay "preliminary exploration on the teaching reform of Chinese art and traditional Chinese painting appreciation course", so as to realize the optimization of education through integration. Yu Bo of Tongli middle school in Wujiang District of Suzhou City mentioned in his article on the integrated teaching of fine arts and other subjects that there are many connections between fine arts and other subjects. Based on teaching practice, we should make bold attempts to guide students to tap their potential in integrated learning and promote diversified development [3].

To sum up, this paper first expounds the related concepts of Chinese painting and Chinese painting teaching, takes a middle school in our city as the practical goal, synthesizes the problems existing in the current middle school Chinese painting teaching, explores the teaching methods and students' innovative methods, emphasizes the integration with other disciplines in the teaching, and adds color to the previous Chinese painting teaching singleness, so as to achieve the goal of teaching.

2. Related Concepts

2.1 Introduction to Chinese Painting

No two cultures are the same or the same. Similarly, the culture of the Chinese nation is very different from that of other nations. In the process of painting, the ancients reflected the characteristics of "both form and spirit" and left them in the painting scroll, which has been preserved until now after a long history of washing. So it has the characteristics of clear lines and vivid depiction. It shows the wisdom of the ancients, has its own unique advantages and characteristics compared with other paintings, and occupies an important position in the world's art history. In ancient times, some western countries mainly used oil to express their paintings, while ancient Chinese people used brush and ink to draw beautiful paintings on silk or rice paper, or give full play to the function of ink method to achieve the artistic effect of "water halo ink chapter" and "as well as five colors". The color is not as bright as before, but the ink is more mellow, and the philosophy is more profound and thought-provoking [4].

2.2 Significance of Traditional Chinese Painting Teaching

(1) Formal beauty

If students want to understand the characteristics and differences of Chinese painting, it is not enough only through the teacher's explanation of the textbook or the simple appreciation of the works. In the teaching process, we can use the method of comparison. The teacher can analyze and compare the western paintings with the famous Chinese paintings. In the process of comparison, the teacher can explain in detail, and the students will gradually improve in the process of learning gradually
understand the beauty of Western painting that emphasizes shape and color, we can also see the rich level of beauty of Chinese traditional painting through the point and line. Chinese traditional painting is generally the point, line, surface through the appropriate and reasonable layout, to ink point and line to shape.

The definition of each other depends on the surface. The composition of point, line and surface is the most characteristic and important embodiment of the beauty of traditional Chinese painting form. It forms a level of beauty in the space, and the author's inspiration and feelings are also well reflected in it [5].

Lines are endowed with inspiration and life in the works of these artists. Its thickness, length and shade of ink all have different meanings. These lines combine with each other to create a beautiful artistic conception. The characters, insects, birds, landscapes and mermaids are all drawn by these lines. Although some of the paintings may not match the actual situation, these lines are full of aesthetic feeling and artistic sense, plus the combination of painting. The flexible use of pen and ink makes Chinese painting full of strong expressive force and charm. This kind of situation is better than a thousand words, and can not be described with words. When appreciating, we should follow the rhythm of the author, place our feelings in the landscape, and experience the vividness and softness of these lines [6].

These contents are more complex. There should be some ways to learn and appreciate. If the appreciation method is wrong, we can not understand the mystery. Teachers should teach students how to appreciate paintings in teaching. When appreciating a work, first make a macroscopic observation of the work. You can roughly understand the author and content of the work, as well as the background and intention of the painting. Let the students understand the general layout and specific meaning of the painting through the appreciation of the painting [7].

The style leaves an impression in the mind, and then carries on a careful reading and appreciation of the details and important parts of the work, observing its unique charm. Finally, we can make a summary and aftertaste from the macro perspective, so as to achieve the teaching purpose, let the students have a comprehensive and profound understanding of Chinese painting, and appreciate the author's creative ideas.

(2) The beauty of artistic conception

Ancient painters generally have their own views and views. Some painters are tired and dissatisfied with real life and society. In the painting will be their ideal life and state described, the pursuit of a spiritual feeling, so that their ideals can be played in the painting, the works of the ancients have a "mood", mood in the creation of Chinese painting is a very important part, painters generally have to invest enough ink, pour enough mind, a work if there is a "mood". If you have a good artistic conception, then the appreciator will naturally be in it and deeply attracted by the work. In this artistic conception, the distance between the appreciator and the author is also greatly shortened. The appreciator is in a completely relaxed state in this artistic conception, and his imagination is greatly developed, so that he can well understand the author's intention at that time. Qi Baishi, a painter familiar to all of us, is a painter who is famous for his shrimp painting. His simple painting style has deeply influenced generations of Chinese people. For example, the shrimp painted by Qi Baishi in ink and wash well reflects the transparent shape of the shrimp on the paper. The shapes of the shrimp are different and lively, reflecting Qi Baishi's love for life and art. Another example is his representative work "house bird", which seems to be a few simple strokes. It outlines a house bird standing on a branch, with less ink and a lot of white space. These white spaces leave endless imagination space for the viewer, and let people stay in the "artistic conception", so as to achieve the effect of "no painting is a wonderful place". It can be said that a work without a good "artistic conception" can not be called a work of art, just a picture without inspiration.

(3) Improving students' aesthetic quality

Because the content of traditional Chinese painting is generally abstract and needs to be understood seriously, but many students do not achieve this ability and interest. As teachers, they need to spend some time in these aspects and use certain means to improve students' aesthetic quality and ability.
Students must have a good interest in learning anything before they can put in a lot of energy to study and study it seriously. Modern multimedia technology is very developed, so we can use multimedia to cultivate students' interest in this aspect. For example, when introducing Xu Beihong's the picture of eight steeds, you can first use multimedia to play a magnificent classical music. While playing the music, you can make the painting into an animation and slowly display it on the screen. Then the teacher affectionately introduces the creative background and connotation of the picture of eight steeds, and students will be easily attracted to classroom teaching [8].

In the past, the traditional teaching excessively ignored the status of students. Generally speaking, teachers taught on it, which often failed to achieve good teaching effect. Therefore, a new teaching form can be adopted to put students in the main position. Students in the class can be divided into several groups for work appreciation and exchange. Finally, the group will take the stage for learning experience speaking. Only in this way can students' dominant position be highlighted and their interest in learning be increased [9].

Of course, students' aesthetic quality is not only to appreciate the works, they need to constantly feel and experience. Students should explore the best place in the works according to their own understanding, and let students love life and nature more in the process of appreciation.

(4) Cultivate patriotism

Many of the Chinese paintings reflect the people's livelihood at that time, or express the author's admiration for some outstanding patriotic figures. These works occupy an important position. Especially in the appreciation part of middle school art, there are many representative art works, such as pottery, bronzes, ancient sculptures, silk paintings, murals, terracotta warriors and horses, which contain a lot of patriotic thoughts and feelings, and are good materials for patriotic emotional education. These works can not only improve people's understanding and understanding of art, but also cultivate students to care about society and people's feelings from an early age. They are an effective means of patriotic education for students and conform to the current teaching requirements [10].

2.3 Big Data Related Formulas

(1) Mean square error

\[ RMSE = \sqrt{\frac{\sum_{(u,i) \in T} (r_{ui} - \hat{r}_{ui})^2}{|T|}} \]  

(2) Mean absolute error

\[ MAE = \frac{\sum_{(u,i) \in T} |r_{ui} - \hat{r}_{ui}|}{|T|} \] 

(3) Accuracy

\[ Precision = \frac{\sum_{(u,i) \in R} |R(u) \cap T(u)|}{\sum_{u \in I} |R(u)|} \]

3. Investigation on Innovative Practice of Chinese Painting Teaching

3.1 Investigation Purpose

This study mainly investigates the real situation of Chinese painting teaching in high school students' learning, investigates students' learning attitude and favorite teaching methods of fine arts, understands their interest in learning Chinese painting related knowledge and their understanding of Chinese
painting knowledge, finds out the existing problems, and analyzes the causes of the problems. Make the research of artistic conception teaching of Chinese painting in senior high school concrete, scientific and accurate. Through the analysis of the results of the questionnaire to understand the problems of students in the study of Chinese painting, to provide reference and basis for middle school Chinese painting teaching research, in the actual teaching, so that students better learn Chinese painting, understand Chinese traditional culture and art, and have a strong interest in learning it.

3.2 Respondents
The research object of this paper is a high school student in our province. Five high school students were randomly selected for the survey. Survey method: This survey adopts questionnaire survey. Number of respondents: 200.

4. Investigation Results and Analysis

4.1 Students’ attitude Towards Chinese Painting

| Love of Chinese Painting | Option          | like very much | like | Soso | Dislike |
|--------------------------|-----------------|----------------|------|------|---------|
| Number of people         | 23              | 52             | 94   | 13   |         |
| Proportion               | 12.64%          | 28.57%         | 51.65% | 7.14% |

As shown in Table 1, 12.64% of high school students like Chinese painting very much, 28.57% of high school students like Chinese painting, 51.65% of high school students generally like Chinese painting, and 7.14% of high school students don't like Chinese painting.

| What kind of Chinese painting is your favorite | Option | Number of people | Proportion |
|----------------------------------------------|--------|------------------|------------|
|                                              | like very much | 30          | 16.48% |
|                                              | like     | 129          | 70.88% |
|                                              | Soso     | 23           | 12.64% |

As shown in Table 2, most high school students prefer landscape painting, accounting for 70.88%, 16.48% like figure painting, 12.64% like flower and bird painting, and the proportion of high school students who like figure painting and flower and bird painting is almost the same.

It can be seen from the data that most of the students think that learning Chinese painting can improve their learning ability. They do not exclude Chinese painting, some even love it, and the students especially love landscape painting. Therefore, in teaching, we should reasonably add or adjust the teaching content according to the students' interest points, and mobilize the students' learning enthusiasm, in order to achieve better teaching effect Fruit.

4.2 Survey of Teaching Methods and Activities
In the art classroom, 24.72% of high school students like the learning style of teachers, 22.53% of high school students like the learning style of group cooperation, 14.29% of high school students prefer the learning style of independent inquiry, 35.16% of high school students like the learning style of extracurricular practice, and 3.3% of high school students like other learning styles. What kind of activities can be carried out in art learning to improve their learning enthusiasm? 21.98% of the high school students said it was work exhibition, 13.73% said it was competition evaluation, 28.02% said it was interest group, 36.27% said it was social practice. As shown in Figure 1 and Figure 2.

From the data, it can be seen that students are more enthusiastic about outdoor learning, but less interested in teachers, professors and group cooperation. According to their interests, teachers can arrange some different learning activities and different types of activities, so as to improve students' learning enthusiasm and efficiency, and increase students' learning fun.

4.3 Innovation Countermeasures of Chinese Painting Teaching

(1) Improving teachers’ quality

To carry out the teaching of Chinese painting with artistic conception as the center, teachers need to have enough knowledge reserves and Chinese painting literacy, so that students can understand the artistic conception of Chinese painting in simple terms.
In the interview with high school art teachers, it is found that some young teachers are not majoring in traditional Chinese painting, and they do not know much about and are not interested in traditional Chinese painting. This leads to their choice of classroom content will be less involved in Chinese painting, and in the classroom can not create Chinese painting teaching mood. In view of this kind of situation, teachers should strengthen their reserves of Chinese painting related knowledge in their spare time, improve their aesthetic appreciation ability of Chinese painting works, read more relevant books, even participate in some classes, or consult other experienced excellent art teachers in the school. In addition to these, they have to try Chinese painting themselves.

Only when the teacher has a deep understanding of the copying and creation of traditional Chinese painting, can the students be infected during the lecture, and then have an interest in learning Chinese painting.

But the quality of Chinese painting can not be improved in a few days, which requires the persistence of art teachers, long-term continuous learning. Art teachers can first cultivate their own interests, first from the aspects they like to understand, if they like figure painting, they can first understand and learn figure painting; if they like modern Chinese painting works, they can start from the modern, and gradually understand the ancient; if they like freehand brushwork, they can first understand ink painting works, and then understand fine brushwork works. Interest is the best teacher, art teachers only cultivate their own interest in learning, will be willing to spend time and energy to strengthen their own quality of Chinese painting. Art teachers can use their spare time or spare time to teach.

In my spare time, I copy some representative works of Chinese painting and read some books about Chinese painting theory. When the copy works and reading materials reach a certain number, the aesthetic ability of art teachers will also be improved, and then quantitative change will produce qualitative change. In this way, art teachers can not only improve their Chinese painting literacy, but also will not affect their work and life, and will not have great pressure.

Art teachers should not only improve their Chinese painting literacy, but also improve their classical culture and enrich the knowledge of other disciplines, such as literature, ancient poetry, Chinese history and so on. Only art teachers with profound knowledge can learn from others and talk with them freely in the teaching of Chinese painting. At the same time, the school can organize some teachers' exchange meetings, and teachers of various disciplines can exchange and promote each other by making use of the connection between various disciplines.

(2) Optimize classroom teaching effect

In the process of teaching, teachers should pay attention to the artistic conception of Chinese painting. In the process of students' appreciation of art works, they should strive to create something that can arouse people's resonance in Chinese painting works. When students create their own works, they should actively guide students to dig out the things that can arouse people's resonance in their works. Cultivate students' rich imagination, various interests, broaden their horizons, improve students' artistic conception expression ability. And students' artistic conception expression ability must be improved by means of gradual practice and appreciation of a large number of traditional Chinese paintings. In the teaching, guide students to experience the superb skills of artists to express artistic conception, and learn to apply them to students.

In my own creative practice. Art teachers can use scene teaching, scene teaching, picture teaching, PPT teaching, video teaching and other comprehensive means to carry out art teaching.

Through the investigation, it is found that many high school students are lack of aesthetic ability and correct aesthetic values. Many students in the appreciation of art works, only feel the simple visual stimulation, can not understand the connotation and deep meaning of the works, and works can not produce emotional resonance. Teachers can put the ancient poems that students have learned into the teaching of Chinese painting, which can help students learn to understand the artistic conception of Chinese painting.

Conditional through visiting the exhibition of Chinese painting, can also improve students' aesthetic taste, make them love life, active life. We can also select some excellent Chinese painting
works of students for exhibition, advocate students to learn more about Chinese traditional culture, promote students to learn from each other, listen to different criticisms and suggestions in the process of sharing knowledge, and improve each other. Through the exhibition of Chinese painting works, students can also gain the satisfaction and achievement of completing Chinese painting works. With a good learning atmosphere of Chinese painting, teachers will be full of energy in art teaching.

5. Conclusion
This paper analyzes the teaching problems of Chinese painting in junior high school from various angles, and puts forward the characteristics of Chinese art Points and advantages to do a detailed discussion, and combined with their own experience in art teaching to put forward some improvement experience, and draw the following conclusions: (1) Chinese painting is an excellent representative of China's traditional culture, junior high school students to learn Chinese painting for the inheritance of China's traditional culture, carry forward the national spirit is of great significance; (2) according to the author's teaching experience We should know the problems existing in the teaching of traditional Chinese painting from the practical experience in the teaching of traditional Chinese painting.

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