

Application of Modern Scientific and Technological Products in the Teaching of Aesthetic Education Courses in Colleges and Universities

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Abstract. With the rapid development of current science and technology, modern science and technology has penetrated into all fields of society and boosted the rapid development and progress of society in an all-round way. Therefore, it is necessary to make full use of the functions of modern science and technological products so that they can really become the assistants to learning rather than the obstacles, and students should be guided to use scientific and technological products for learning, instead of being blindly prohibited and suppressed. Moreover, science and technology should be closely combined with education and teaching so as to solve all kinds of problems arising in the teaching of elective aesthetic courses in general education in colleges and universities, and to promote the development of more effective, diversified and scientific teaching methods, which is the development trend of the contemporary society. This paper will study the application of modern scientific and technological products in the teaching of aesthetic education courses in colleges and universities from three aspects of the functions and characteristics of modern science and technology products and their application in colleges and universities in China, the effectiveness of the application of modern scientific and technological products in the teaching of aesthetic education courses, and the utilization of modern science and technology products to advance the innovation and development of the teaching methods of aesthetic education courses.

Introduction

General Secretary Xi Jinping proposed at the National Education Conference that aesthetic education in schools should be strengthened and improved in an all-round way, and that we should persist in educating and influencing people with aesthetics and culture so as to improve students' aesthetic and humanistic qualities. In addition, in his reply to the old professor of the Central Academy of Fine Arts, General Secretary Xi Jinping pointed out the direction for strengthening aesthetic education in the new era. Our aesthetic educators should spare no effort to pursue the construction of an aesthetic education system with Chinese characteristics, to integrate aesthetic education into education and teaching, to highlight aesthetic education in artistic creation, to attach importance to aesthetic education in academic research, to manifest aesthetic education in serving the society, to develop aesthetic education in cultural inheritance, and to carry forward the spirit of Chinese aesthetic education in the course of international exchanges.

Functions and characteristics of modern science and technology products and their application in colleges and universities in China

Characteristics of modern scientific and technological products

In terms of the concrete manifestation of modern scientific and technological products, their characteristics are mainly embodied in the following aspects:

With the rapid development of science and technology, it takes a shorter and shorter cycle to transform the achievements in science and technology into real productive forces. According to the

present situation, the development of science and technology shows a trend of rapid development, which is mainly manifested in the continuous emergence of new knowledge and technology, the rapid growth of scientific and technological knowledge and achievements of scientific research in quantity, as well as the sharp shortening in the time for people to acquire knowledge and information due to the emergence of the Internet, the increasingly short cycle for the achievements in science and technology to be transformed into real productive forces, thus promoting the in-depth development of human society to various fields.

Because of the intersection and integration of various disciplines and the emergence of a large number of new disciplines, the specialized and comprehensive development of different disciplines have been promoted, thus allowing the modern science and technology to continue to extend and penetrate in terms of depth and breadth. Nowadays, with the rapid development of science and technology, a large number of significant and cutting-edge achievements in research tend to be achieved only through the comprehensive cooperation of multiple fields and disciplines.

At present, science and technology have merged into one, which greatly shortens the cycle of tackling key problems in scientific research, and basically forms the integration of science, technology and production. Today, the application of technology is based on the development of science, while the development of scientific theories takes the application of technology as its driving force. The two are promoting and depending on each other.

Functions of modern scientific and technological products

Socialization is the main embodiment of the functions of modern scientific and technological products. The function of scientific and technological products refers to socialization. At present, one of the important social activities for human beings is the manufacturing of modern scientific and technological products, while the ultimate goal is to improve the survival status of human beings in nature and promote the progress of human society. The rise of modern scientific and technological revolution has resulted in tremendous changes in human society. Among the social functions of modern science and technology, the emergence of information technology has a far-reaching impact on the outcome of social development, and human society is moving towards a brand-new information age.

Application of modern scientific and technological products in colleges and universities in China

The application of modern scientific and technological products in colleges and universities in China is mainly reflected in the use of the Internet to carry out education and teaching. Nowadays, most colleges and universities have carried out teaching activities with the help of the Internet, set up relevant technical departments, and equipped themselves with the full-time staff, while increasing the funds for the Internet and the investments in the Internet devices.

As one of the modern scientific and technological products, the Internet plays a role in the education and teaching activities in colleges and universities, which is reflected in two aspects. One is that it expands the space of education and teaching work in colleges and universities, and the other is that it can promote students' initiative and enthusiasm in learning.

Today, with the rapid development of science and technology, some universities have begun to carry out teaching activities by methods of multimedia television network while applying the traditional teaching methods, so as to satisfy the needs of the development of modern education and teaching in China. Due to the characteristics of multimedia television network teaching, such as image, pertinence, timeliness, extensiveness and emotionality, this new type of education has strong vitality and has become a better form of teaching activities in colleges and universities.

Effectiveness analysis of the application of modern scientific and technological products in the teaching of aesthetic education courses

Integration of modern scientific and technological products and aesthetic education courses.

Formation of the scenario teaching mode by combining modern science and technology with

aesthetic education courses.

Under the background of modern science and technology, the reconstruction of aesthetic education courses focuses on scenario teaching to simulate the traditional teaching mode, so that students can have an understanding of the contents of art works with the support of modern science and technology. Moreover, based on modern science and technology, such as network information, multimedia and digital technology, it will enable teachers to enhance the intuitive feelings of aesthetic education courses, so that students' aesthetic ability for works of art can be improved, their creativity and imagination in arts will be stimulated, and thus the learned works of art will have a stronger expressive force.

Enhancement of the cultivation of students' artistic capabilities by combining modern science and technology with aesthetic education courses.

Classroom teaching is the major teaching method for regular education in modern colleges and universities, while the classroom has become the main position of aesthetic education and teaching. For the infiltration of modern science and technology into aesthetic education in colleges and universities, on the one hand, students' abilities to understand, experience, appreciate and evaluate the works of art have been improved. On the other hand, it stimulates students' rich artistic emotions and cultivates their imagination and creativity in art. At the same time, teachers need to strengthen the cultivation of students' artistic ability through various methods in the course of teaching practice. In this regard, it becomes necessary to integrate modern science and technology and art courses. In practical teaching, the application of modern science and technology will enable students to learn aesthetic education courses better.

Improvement of the current teaching system by combining modern science and technology with aesthetic education courses¹⁻³.

In colleges and universities, they not only carry out collective lecturing in large classes, but also attach great importance to the influence of small class teaching on students. With the modern scientific and technological products as a supplementary method for teaching, the theoretical learning in large classes can improve students' basic theoretical knowledge, while the lecturing in small classes can solve students' practical problems. Under the background of modern science and technology, aesthetic education courses allow students to download the auxiliary textbooks through the media, coupled with the teaching contents related to modern art, science and technology, which will overcome the problem that the original textbooks can not keep pace with the development of the times and meets the urgent demands of students of all grades for the study of arts.

Effectiveness and necessity of the application of modern scientific and technological products in aesthetic education courses.

Effectiveness of the application of modern scientific and technological products in aesthetic education courses.

With the rapid development of modern science and technology and the continuous creation of scientific achievements, the teaching methods of aesthetic education courses in colleges and universities have been changing at all times, which has led to revolutionary changes in the teaching methods of aesthetic education courses.

For example, multimedia teaching has shown prominent advantages in aesthetic education courses, such as improving students' interest in learning, perfecting the contents of the courses, consolidating the quality of classroom teaching and enhancing the teaching effects. As a new teaching mode, network teaching allows some phenomena that can not be observed or some teaching contents that are difficult to express to be displayed in a vivid and intuitive way, which can improve students' enthusiasm in learning and deepen their understanding of the problems.

Necessity of the application of modern scientific and technological products in aesthetic education courses.

The content of aesthetic education courses calls for diversified teaching methods. The content of aesthetic education courses is to cultivate students' ability to recognize, love and create beauty, which requires that teachers should not adopt the general traditional teaching methods in aesthetic

education classes, but should adopt a great diversity of teaching methods. The development of modern science and technology provides the greatest space for the diversification of the teaching mode of aesthetic education courses in colleges and universities, which requires that colleges and universities should establish and improve a full set of scientific and reasonable evaluation system, and carry out the diversification of educational methods.

The purpose of aesthetic education courses calls for modern teaching methods. The aim of aesthetic education is to cultivate and develop students' ability and interest in creating realistic and artistic beauty. That is to say, the supreme goal of aesthetic education is to require students to be able to create beauty. The cultivation of students' creativity is inseparable from the improvement and establishment of new teaching methods by colleges and universities⁴⁻⁶.

Advancing the innovation and development for the teaching methods of aesthetic education courses by means of modern scientific and technological products

Categories of modern scientific and technological products which are applicable for aesthetic education courses in colleges and universities.

With the development of science and technology, there have been increasingly rich varieties of modern scientific and technological products. Mobile phones, for example, have evolved from a single communication tool to a powerful carrier of multimedia Internet systems. In addition, there are tablets, smart glasses, omnipotent microphones, virtual reality technology (VR) and so on. These mobile butlers and personal secretaries cooperate with a number of APPs and software, which are applicable for teaching, thus developing a strong combination of hardware as a carrier and software as a force. However, these new products and technologies are excluded from our teaching. Moreover, we may become pale even at the mention of the name of mobile phone. The cloth bags that hold mobile phones have been equipped in the front of the classroom of a lot of colleges and universities now, for fear that the high-tech products will hinder the development and progress of teaching methods. In today's society, even spiders can use the signal lights at intersections to weave webs and prey, but why can't we adopt the modern advanced scientific and technological products to assist us in teaching? We believe that the modern scientific and technological products can be used as a supplementary means of our teaching as long as they are conducive to enriching our teaching methods.

A survey of the intention to use modern scientific and technological products in aesthetic education courses in colleges and universities.

This experiment mainly carries on the questionnaire survey to the students of Zaozhuang University. A random survey was conducted among the students who attended elective courses for general education. A total of 500 questionnaires were distributed and 469 questionnaires were collected, among which 469 valid questionnaires were collected, with a recovery rate of 93.8%, and an effective rate of 100%. The questionnaire mainly involves the grade of the students involved in the survey, whether they are willing to use modern scientific and technological products in aesthetic education classes, which scientific and technological products they are willing to use and whether they are willing to use the modern scientific and technological products in the whole process.

Grade

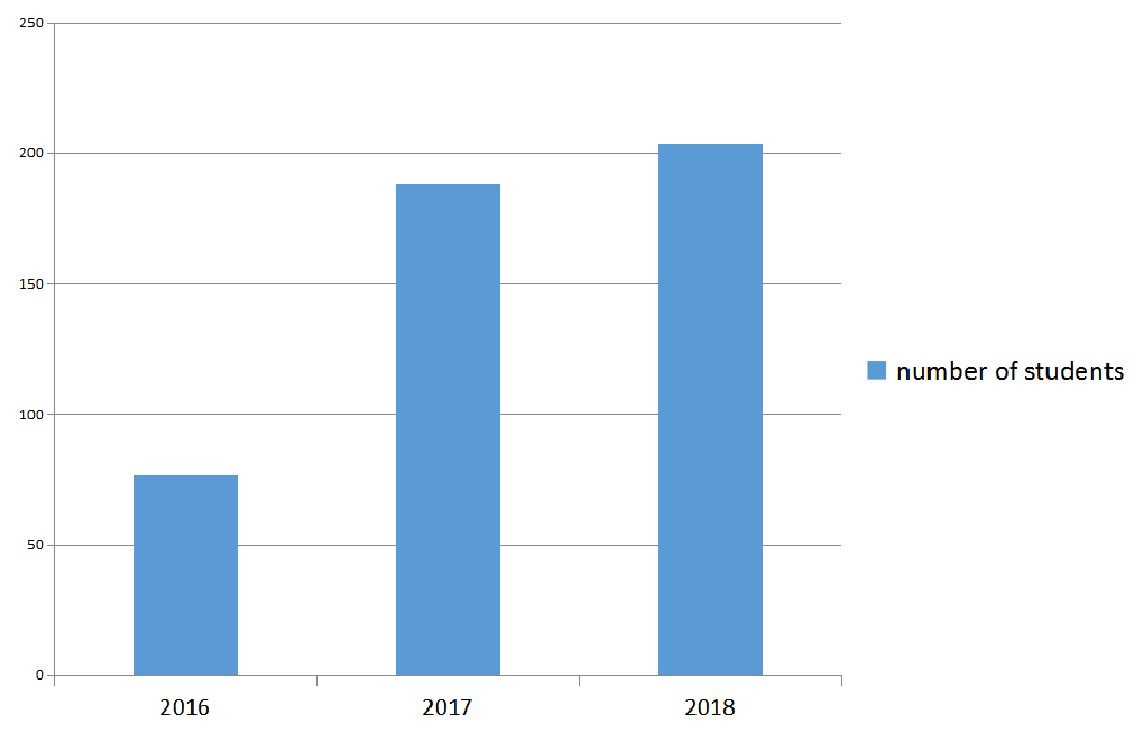


Figure 1. Chart for grades of respondents

The study surveyed 469 students, consisting of the students in grades 2016, 2017 and 2018. From Figure 1, we can see that a larger number of students in lower grades attend the elective courses for general education, which is because most of the students have gained the necessary credits in the freshman and sophomore years in college. The number of students surveyed in Grade 2016 was 77; the number of students surveyed in Grade 2017 was 188; the number of students surveyed in Grade 2018 was 204. All of them have received general education⁷⁻⁹.

Are you willing to use modern scientific and technological products in aesthetic education classes?

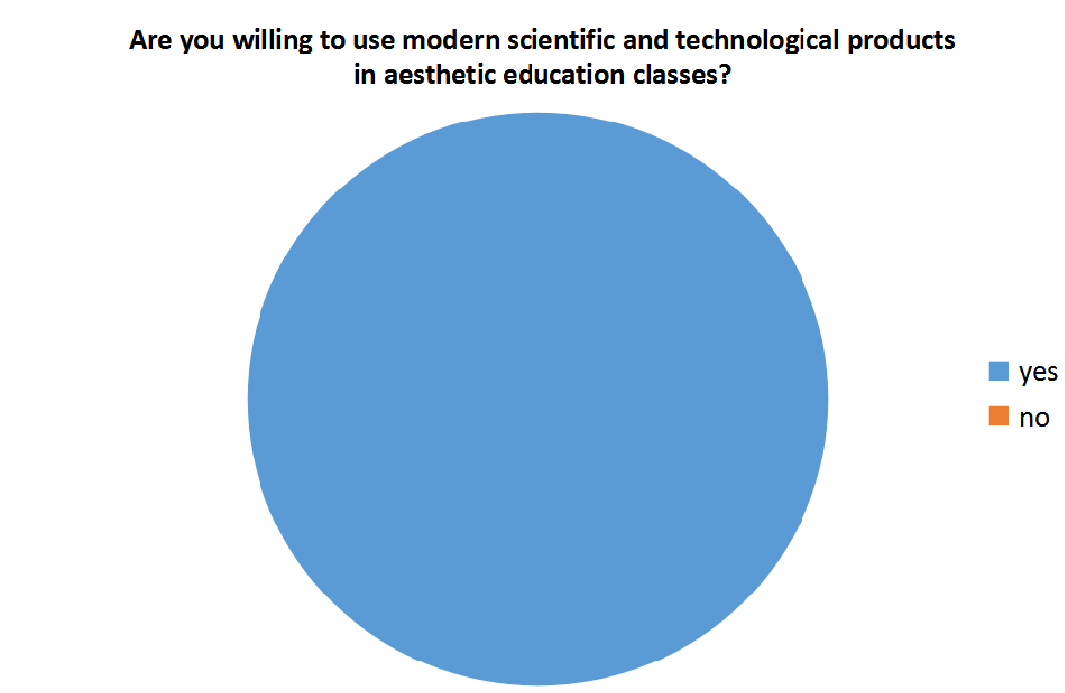


Fig. 2 Are you willing to use modern scientific and technological products in aesthetic education classes?

A total of 469 students were surveyed in this study, and all of them were willing to use modern scientific and technological products in aesthetic education. As shown in Figure 2, all the college students surveyed are willing to use modern scientific and technological products as a supplementary means for learning in their aesthetic education classes. And a majority of students are willing to use mobile phones and tablets.

Are you willing to use the technological equipment in the whole process?

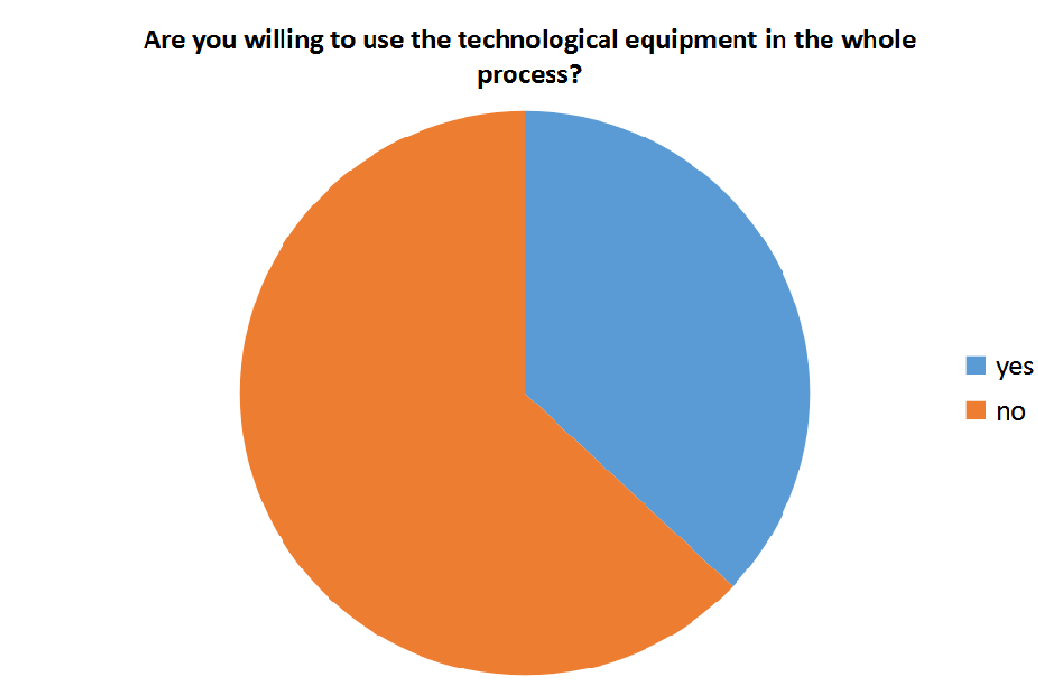


Fig. 3 Are you willing to use the technological equipment in the whole process?

A total of 469 students were surveyed. Among them, 63% of the students thought that it was not suitable to use the technological equipment in the whole process, and 37% of the students thought that they could use the technological equipment in the whole process. As can be seen from Figure 3, most of the students believe that it is an effective supplementary means for study to apply modern scientific and technological products in aesthetic education classes, while some students believe that it is highly necessary and essential to use the modern scientific and technological products in aesthetic education classes. It seems to them that the use of modern scientific and technological products enables them to greatly improve their efficiency and interest in learning in aesthetic education classes.

Conclusion

Aesthetic education has a positive impact on students' moral, intellectual and physical education. Specifically, aesthetic education enables students to have an understanding of people's ideals, life and struggle. While students receive vivid ideological and moral education, the healthy growth of their political quality, ideological feelings and moral outlook can be promoted. Moreover, aesthetic education allows students to be acquainted with the history and the reality, and it also helps to cultivate their imagination, observation and creativity¹⁰.

The use of modern scientific and technological products in aesthetic education classes can greatly improve students' efficiency of learning and arouse their interest in learning. If we make full use of the functions of modern scientific and technological products, we can make it an assistant of learning and make a close combination of science and technology with education and teaching, so that we can solve the problems of dullness and single teaching methods in the teaching of elective aesthetic courses for general education in colleges and universities and promote the development of more effective, diversified and scientific teaching methods, which is the

development trend of the contemporary society.

Acknowledgements

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