The Influence of Music Appreciation Courses on The Formation of College Students' ideological Quality under The Environment of Big Data

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Abstract. At present, with the deepening of China's education system reform, China's music education is facing a rare opportunity to develop, music education developing the students' quality comprehensively, promoting the construction of socialist spiritual civilization will play a greater role. This article will music combined with large data environment in the school, to explore big data, and the practicality of music education in education, some problems and try to combine big data with innovative ideas to solve these problems, in order to enrich the content of music of music on college students' thought positive impact of sustainability. Finally, after expounding the relevant concepts and theories, this paper demonstrates the feasibility of bringing positive influence of music appreciation course on the ideological quality of college students behind the use of big data technology from the aspects of music education methods, approaches, evaluation, contents and objects.

Key words: Big Data Era, Music Education, College Students' thoughts, Influencing Factors

1. Introduction
With the rapid development of economy and society, technology in all areas changes with each passing day, portable computers, mobile phones and other intelligent terminals popularization application, based on the Internet development of information and Internet technology, the information volume of data presents the fusion type growth, triggered a huge data revolution, therefore, in today's world into the era of data. At the same time, many harms hidden behind it are also exposed, the information source is not clear, the content is numerous and complicated, seriously affect the students to establish a correct moral view. In the face of the new situation, according to the new characteristics of students, It has important theoretical and significance to think about how to analyze these works efficiently of music education, explore its influence on the ideological quality of students, and realize the educational effect of combining knowledge with practice.

The anthropocene is a concept that has emerged with a wide range of impacts. Social concerns of the anthropocene that have not yet been approved. Lizzy Hare claims they will completely change the form of technology. The economic concepts can make ecological science clearer and easier to
understand outside the scientific community, however this clarity limits the possibility of thinking outside the framework of the market. It is necessary to overcome the narrowness of vision [1]. The Internet of things technology play an important role in the practicality of this project in smart city. Big data is a technology that collates and collects large amounts of data from a variety of fields and sifts them for practical use. Hashem believes that as an unexplored field, whether the combination of Internet and big data technology can provide high-quality data services for smart cities is a controversial issue. The key point of the emerging new problems lies in whether the technology passes the standard, and also determines whether the smart city can realize the intelligent environment by the key technology, so as to better meet the needs and expectations of the smart city itself. [2]. The rapidly expanding field relies on the medical system delivery tool, in order to collect, analyze, manage and screen a large number of complex data, there are structural and non-structural different situations. Big data analysis has recently been applied to the process of adjuvant medical services and disease exploration. Ashwin Belle discusses some of the major challenges, focusing on three types of potential and research areas: images, signals, and genomics-based analysis. He also discusses recent research using large amounts of medical data while synthesizing multi-modal data from different aspects [3].

In the “big data”, mobile Internet has become a essential technology in day life. All kinds of mobile terminal application software are favored by college students. By studying the influence factors of music appreciation course on the ideological quality of college students, this paper provides a variety of suggestions to improve the presentation of teaching contents, which are helpful to the education of the overall quality of students.

2. Proposed Method

2.1 Big Data Era

(1) Characteristics of big data

1) Magnanimity

Magnanimity is the most important part in the traditional cognition of industrial data and also the most studied part. A complex industrial production process often needs to monitor and control a large number of measuring points and circuits [4].

2) Diversity

Traditional industrial storage systems usually record only the on-off and analog quantities of the production process. With the innovation of materials science and the progress of detection technology, CCD and other image processing equipment and acoustic sensors have gradually adapted to the harsh production environment, recording a large number of important image and sound data in the production process. This massive influx of unstructured data has greatly enriched the types of big data in modern industrial processes and brought many opportunities and challenges [5].

3) High speed

Modern industrial production scale, the system structure is complex, control circuit and the number of measuring points, the tens of thousands of equipment can produce hundreds or thousands of data per second, especially the influx of unstructured data, data in information system be created quickly and mobile, production process data speed reached unprecedented levels.

4) Variability. The production process has a multi-level structure, and the big data of the modern industrial process will also present a changeable form [30]. The difference between steady state operating condition and dynamic operating condition in the production process makes the correlation between the data show different inertia and delay. Equipment failure will also change the corresponding relationship of multiple parameters, bringing many challenges to data-based analysis [6].

(2) The meaning of big data system

At present, big data has been filled with all fields of human production and life. However, the speed of knowledge acquisition based on data lags far behind the speed of data growth. Big data cannot be effectively converted into effective information to guide production, improve efficiency and
save resources. How to conduct deep and multi-scale mining of big data and acquire knowledge is a problem [7]. Research on methods based on big data to increase the conversion efficiency from data to knowledge is of great significance to modern industrial production, as shown in:

1) Improve control quality and promote the application of advanced control strategy. The control quality of the advanced control strategy often depends on the accuracy of the controlled object model. Using the multi-scale characteristics of big data to build a data-driven model based on data analysis and mechanism analysis can improve the modeling efficiency.

2) Using existing resources and actively developing state monitoring methods can reduce the cost of equipment maintenance and technological innovation and help the generation process. Studying approaches based on big data can provide companies with a wealth of new information that is often difficult to obtain in other ways. By extracting effective information from big data, the competitiveness of enterprises can be greatly improved [8].

2.2 Educational Research Methods and Theories
It is a great breakthrough in the development of educational research to study education from the intuitive and speculative method to the specific educational scientific research method. On the theoretical basis of educational research methods, the educational theorists have carried out extensive exploration in recent years, and the theoretical basis proposed in the exploration mainly includes philosophical foundation, mathematical foundation, natural science foundation, system science foundation and some other methodological foundation. Educational research method refers to the method of conducting pedagogical empirical research rather than theoretical research. The theory of educational research method shows that an educational scientific research method should have a clear concept, research purpose, and the characteristics and application scope of this educational research method. Only with these complete aspects, can this research method be operable and be adopted by us [9].

Educational science research method is different from natural science research method and many social science research methods. Synthesis of research objectives; The participation of research subjects. The theory of educational research method not only has the same aspects as general research, but also has the particularity of its own research field [10].

3. Experiments

3.1 Experimental Background
Education big data research method is the data applied in education, we will through the phenomenon of education or the education activity is transformed into the data, the analysis of all kinds of data, get useful information for research, education researchers used education big data analysis method can forecast the development of education, so that researchers can more clearly know the education object, to a more targeted education by education. The big data research method can analyze the whole research sample, which can make the research from deductive reasoning to empirical research. The emergence of this form makes the results more reliable. On this basis, the research using the big data research method will have a high predictive power.

3.2 Experimental Design
Using big data research method to solve the education problem, the author adopts the self-constructed database-centered model processing form. Any education research is based on a certain amount of education problems, clear the problem to be solved is also a model of the initial link, after clear the problem of research education, researchers need to find out the factors that may be associated with problem solving, to determine the factors related to the problem solving, researchers need to data processing problems in two steps. One is to directly from the database of digging out the useful data for problem analysis, the second step is to look for missing data in the database, data collection, and then the collected data in the database, by the analysis conclusion again for data in the database. This
paper selected several classes in the sophomore year of a certain university to collect data for investigation. The results are shown in Table 1.

**Table 1.** Analysis of factors influencing the ideological quality of college students in music appreciation class

| Different class | Think it has a big impact | Think there are some effects | Thought it had little effect |
|-----------------|---------------------------|-------------------------------|-----------------------------|
| Class 1         | 21                        | 24                            | 12                          |
| Class 2         | 27                        | 20                            | 11                          |
| Class 3         | 32                        | 16                            | 9                           |
| Class 4         | 19                        | 28                            | 7                           |
| Class 5         | 23                        | 26                            | 8                           |

4. Discussion

4.1 Analysis on The Influence of Music Lessons on The Ideological Quality of College Students under The Big Data

According to the survey data in Figure 1, sophomores in a certain school are generally eager to receive music education. 81 percent of college students like music lessons, 96 percent think music can improve their comprehensive quality and accomplishment, 24 percent think that learning music will help them to work in the future, and 50 percent think that learning music is to improve their musical accomplishment and cultivate their artistic accomplishment. Through the above analysis, we find that although the application of big data has obvious advantages, and that's what's going to happen in the future. Most of the research still focuses on the theoretical discussion of the big data, but the theory of specific application is not yet mature. There are few practical application cases involved in practice. Although some practical solutions are put forward, the real practical effects still need to be studied and considered. Big data is a new thing in the field of education. We also need to learn from foreign advanced ideas and research experience for the in-depth application of big data in the field of education, and continue to explore and discover in the future research practice.

![Figure 1. Evaluation statistics of the influence degree of sophomore students on music appreciation courses in a school](image)

4.2 How Can Music Education Bring Positive Guidance to College Students in The Big Data

The application of theoretical research in educational practice has become a bottleneck. From the survey, it can be seen that the theoretical research on music is mostly a purely empirical report summary, or a more abstract logical reasoning, lacking of systematic and scientific discussion on its
course content. This kind of empty theoretical model affects educational practice. On the other hand, although the current education reform is in full swing, the influence of the traditional education mode and educational concept on the music education in ordinary universities still exists.

The traditional concept of music education focuses on imparting and mastering the music theory and music skills of college students, but it is not enough to understand the role of music education in moral education, aesthetic education and intellectual improvement of college students. Modern ordinary university music education should be open to the idea of change, the music education for improving students' comprehensive quality training is one of the important ways and means, make full use of music education in all kinds of function, based on the background of the music itself outside, character, history, culture, emotion, knowledge, such as content analysis to understand and to teach, to grasp the music theory, techniques such as surface content after the real connotation and essence, to edify sentiment, purify the mind, enrich knowledge for college students, enhance the self-cultivation.

5. Conclusions
The improvement of the comprehensive quality of students is the focus of the current college education in China, is a long-term and arduous task. It is not only related to the employment of college students, but also related to the quality of the people and the modernization of China. This paper shows the influence of music education on the formation of college students' ideological quality in the big data, summarizes the deficiencies of the current teaching form of music course through the investigation and statistics of students' evaluation of music course, and deeply realizes that a scientific and sound curriculum system should be established. Colleges and universities should conform to the trend and need of quality education, ensure the establishment of public music elective courses, and establish a curriculum system suitable for quality education.

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