

# *Cultivation of Artistic Ability of Preschool Education Major in Adult Higher Education in Colleges and Universities Based on Big Data*

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**Abstract:** With the advancement of society and the increase of computer, network and digital media technology, big data technology has become an indispensable part of modern service industry. Big data technology has been developed in all aspects of adult higher education and preschool education, and the value of products and services created has gradually increased. Big data plays an important role in technology innovation and social stability. This article mainly introduces the research on the artistic ability training of the preschool education major of adult higher education in colleges and universities based on big data. This article uses the big data-based research on the artistic ability training of the preschool education major of adult higher education in colleges and universities, starting from the two aspects of adult higher education and preschool education, rationally analyzing the ability training of art education. Research on the artistic ability training model of the preschool education major of adult higher education can make up for the deficiency of the preschool education major of adult higher education in the aspect of artistic ability training. The experimental results of this paper show that adult education in colleges and universities based on big data has increased the efficiency of art education by 16%. This paper analyzes, discusses and summarizes the current situation and research limitations of the art ability training mode of preschool education major in adult higher education, as well as the methods and ways of art ability training, so as to enrich the academic research results.

## 1. Introduction

At present, adult higher education in my country has been vigorously developed and made great progress. Its pre-school education major has provided a large number of teachers for pre-school

education. Exploring the artistic ability training model of this professional will help the construction of pre-school education teachers and promote the vigorous development of pre-school education[1-2]. By investigating and studying the current research status of academia, discovering problems, exploring the causes, and then proposing measures to solve the problems[3-4]. The scientific, standardized and reasonable establishment of preschool education majors in adult higher education and strengthening the construction of preschool education teachers are conducive to solving the problem of adult higher education art training [5-6].

Analysis of the status quo of preschool education artistic ability. Conduct surveys based on the needs of college students for artistic ability. Kazem HA believes that it analyzes the current situation of students' artistic ability in preschool education of adult higher education, and investigates and analyzes the artistic ability of teachers in preschool education majors in individual schools [7]. Franco A feels that there are problems in the cultivation of students' artistic ability in pre-school education of adult higher education. Based on the preliminary investigation, this part analyzes the problems of unclear training goals, lack of innovation in training models, and lack of attention to the construction of teachers in the current adult higher education preschool education students' artistic ability training [8]. An analysis of the reasons for the poor artistic ability of preschool students in adult higher education. This part specifically elaborates the reasons for the current pre-school education students' poor artistic ability from the macro, meso and micro levels [9-10]. However, there are errors in their experimental process, resulting in insufficient accuracy.

The innovation of this article is to put forward a research on the artistic ability training of the preschool education major of adult higher education in colleges and universities based on big data. Study the pre-school education of adult higher education and analyze the countermeasures to improve students' artistic ability. This part proposes corresponding countermeasures against the problems of artistic ability training, namely, formulating scientific talent training goals, innovating artistic talent training models, and strengthening the construction of teaching staff. The purpose of this research is to find a new path suitable for the development of professional artistic ability of preschool education in adult higher education.

## **2. Adult Higher Education in the Environment of Big Data**

### **2.1. Adult Higher Education Environment**

Artistic ability is an important part of the basic quality of preschool teachers. Due to the current lack of high-quality preschool teachers, the cultivation of students' artistic ability is not only one of the main problems faced by preschool education, but also an important part of the deepening reform and development of adult higher education preschool education. In order to accurately reflect the current reality of the artistic abilities of students in the pre-school education of adult higher education, in addition to investigating students at school, it is also necessary to investigate the performance of the school that cultivates the students and the performance of the students after entering the workplace, to understand the status quo of the artistic abilities of pre-school graduates in recent years.

The quality of students in adult higher education schools is generally low. In recent years, the quality of students has generally shown a downward trend. The main manifestations are first. Due to the continuous development of national higher education, the number of students enrolled in ordinary universities has increased year by year, which has affected adult higher education to a certain extent. The number of students enrolled in the school is affected by the social environment. Most students flock to ordinary colleges and universities, resulting in a decline in the quality of the

student source of adult higher education schools; secondly, students majoring in pre-school education in adult higher education need to master in a shorter learning time Systematic cultural theoretical knowledge, strong artistic ability, and strong teaching and research ability can be qualified for pre-school education when stepping into the society and going to the post. However, according to the learning characteristics of adult higher education schools, students often do not realize full-time learning in the school, and some students still adopt correspondence, distance education and other methods to learn. The consequence of this learning mode is that students' operability is poor. Therefore, the judgement of whether students receive effective education is poor, and the school cannot accurately grasp the learning situation of students. Analyze the class situation of adult higher education students, adopt the maximum-minimum method, and standardize the positive indicators and negative indicators. The positive indicators are as follows;

$$X'_{ij} = \frac{x_{ij}}{x_{i\max j}} \quad (1)$$

For negative indicators, the formula is as follows.

$$X'_{ij} = \frac{x_{i\min j}}{x_{ij}} \quad (2)$$

In the gray correlation analysis method, the reference sequence is the optimal value of each index, as shown in the vector  $x_0$ , all elements in the vector  $x_0$  are the maximum value of the corresponding index, and  $x_0(j)$  represents the maximum value of the  $j$ th index.

$$x_0 = \{x_0(1), x_0(2) \dots x_0(n)\} \quad (3)$$

## 2.2. Current Situation of Adult Higher Education

Historical documentation method. From the perspective of historical development, combining the research experience and conclusions of predecessors, find out the theories of this research, and sort out the clues and context of this research. In addition to consulting the library materials, read journals, papers and works, have an in-depth understanding of related basic concepts and theories, and master the status and causes of the artistic ability of adult higher education preschool education, laying the foundation for this research; questionnaire survey method. In order to obtain more accurate data, this study conducted a questionnaire survey with students majoring in pre-school education at two adult higher education institutions in the province. A questionnaire survey is conducted on the status quo of abilities to analyze the problems existing in the artistic abilities of the students of the major at this stage, and then propose corresponding countermeasures for the improvement of the artistic abilities of the students in the preschool education of adult higher education.

Interview method. Through structured interviews with teachers and students of pre-school education majors in two adult higher education institutions in the province, to understand related information such as the pre-school education professional's artistic ability training program and their opinions and suggestions on the reform and innovation of pre-school education professional artistic ability training. With the emergence of art education, art ability emerges as the times require. It is considered to be the product of the mutual penetration of humanistic quality and art skills within a certain period of time. Art ability is not limited to a certain discipline or field, but open.

### 3. Preschool Education under Big Data

#### 3.1. Status Quo of Preschool Education

The poor quality of the students themselves is due to the competition mechanism, which leads to the fact that some students cannot compare with the academic ability of ordinary higher education students. Most pre-school education students have a low level of acceptance of artistic ability training before enrollment, and miss the critical period of artistic ability learning, resulting in poorer basic artistic conditions after enrollment, and it is difficult for students to acquire their own artistic ability in the short-term learning of school. The rapid development has made it difficult for kindergarten art teaching. Since most of the adult higher education students are working adults, due to their own work and family reasons, they often fail to conduct intensive classes normally, resulting in poorer art courses.

The school-running mechanism has led to insufficient time for students to study at school. The school system of adult higher education pre-school education is generally 2.5 years. Some universities and off-campus correspondence education sites blindly pursue economic benefits and reduce the teaching pressure of the school. Adopt the "two years + half a year" or "one and a half years + one year" mode of running a school, that is, let students study in the school for two or one and a half years, and the last six months or one year becomes the student's "internship period". Students find an internship place for internship on their own. What is worthy of recognition is that internship allows students to exercise their operational level in the real work field, and helps students better adapt to social work after entering the society.

#### 3.2. Pre-School Education Teachers and Assessment

According to the survey, teachers in some schools have low perceptions of artistic ability and self-art ability, and the participation in artistic practice is not enough. The existing teaching facilities and equipment of the individual school unit cannot meet the needs of art courses, resulting in some artistic ability courses cannot be carried out. In addition to the daily teaching tasks of most teachers, teachers of adult higher education schools often also need to undertake a series of tasks related to school and self-development, such as school construction and scientific research. According to the survey, teachers' salaries are not high and their work tasks are heavy. Some teachers are part-time or applicant teachers. These realistic conditions easily lead to teachers not being able to focus on teaching, which affects teachers' daily teaching to a large extent. Secondly, some teachers adopt the teaching method based on the text, ignoring the individual differences of students, lack of innovative ability and spirit, and rigid teaching, which inhibits students' creativity.

The school lacks reasonableness and forward-looking in the internship arrangement, and the evaluation often only requires the so-called internship unit to give a certificate. As for whether the student has actually participated in the internship, whether it has reached the corresponding internship standard, it also lacks a corresponding evaluation system. The school will not be held accountable, this kind of internship method of independent internship does not play the role of internship. The assessment method is single and not targeted. With the transition from "elite education" to "mass education", the scale of general higher education has continued to expand, and the entry threshold has been lowered. For many years, adult higher education has been dominated by companies with low academic qualifications and failed college entrance examinations. The structure of the student source has undergone tremendous changes. At the same time, when enrolling students, pre-school education students only need to pass the cultural test to enter the

university. There is no special artistic ability test and interview, which leads to many candidates who do not have the basic ability of the major to enter the preschool Educational major. The specific results are shown in Table 1.

Table 1. Preference questionnaire

classification	percentage	Sort
Performance	75.31%	1
story	71.63%	2
Nursery rhymes	66.3%	3
painting	62.8%	4

#### 4. Artistic Ability Cultivation under Big Data

##### 4.1. Adult Higher Art Ability

Pay attention to curriculum reform and select teaching content. According to the relevant discussion in the previous article, the curriculum reform of preschool education majors in adult higher education schools should focus on the transformation from theory to practice, and select teaching content according to the needs of different majors, and promote "application Leading by "professional talents" and "social adaptable talents", breaking the traditional subject-based curriculum system and highlighting the characteristics of practical teaching. From the relevant content of the "preschool education self-examination undergraduate" curriculum published by the case school, theoretical courses are still entrance exams. The important threshold of the practice courses, especially the professional courses of pre-school education such as vocal music, piano, painting, dance, hand-making, etc., cannot be verified by the exam. Therefore, the school should be biased to weaken the content of theoretical examination and highlight the professional status of practical courses. At the same time, professional courses should also focus on the cultivation of characteristic courses in terms of time and content. The specific results are shown in Figure 1. It can be seen from the figure that most students are willing to participate in various forms of artistic ability training, and the students who clearly indicated that they do not like or do not know whether they like it or not account for only 21.2% of the total number. This shows that students have a higher degree of expectation for artistic ability training courses.

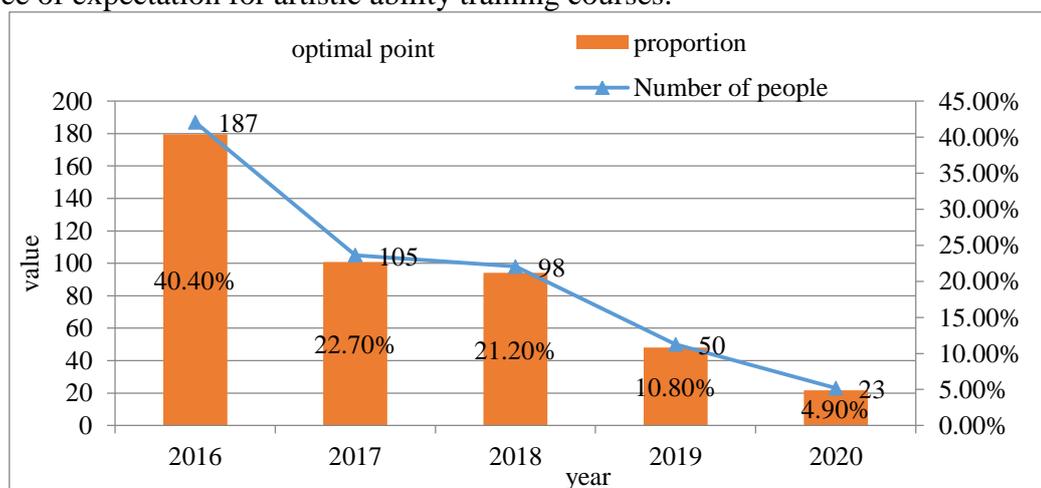


Figure 1. Interviewed students' participation in artistic ability training

## 4.2. Artistic Ability of Preschool Education

The evaluation of the artistic ability of pre-school education majors is mostly based on the method of examination. The advantages and disadvantages of this evaluation method are very obvious: the advantage is that it is easy to operate, convenient for unified management and evaluation, and can judge students' performance to a certain extent. The learning situation, including the understanding and mastery of theoretical knowledge, can be reflected in the way of examination and evaluation. But the disadvantage is that in terms of the cultivation of students' artistic ability, there is a lack of evaluation methods that can comprehensively reflect the students' real practical level. Therefore, reform of traditional evaluation methods is imperative. For pre-school education, which emphasizes practical ability and hands-on ability, when evaluating, pay attention to the evaluation of the learning process. When conditions permit, the combination of examination and examination, written examination and lecture, theoretical examination and skill examination can be adopted. The specific results are shown in Table 2.

*Table 2. Interviewed managers' requirements for teacher quality*

	Media event concept	Objective reporting concept
Ontology	media is the ontology	facts are the ontology
Epistemology	from cognition to fact	from fact to cognition
Axiology	"perceptual" values	"rational" values

It is carried out in a way that combines professional performance and practical training results. The comprehensive evaluation of multiple evaluation methods brings more comprehensive evaluation results, and evaluation conclusions can better reflect the true level of students, and effectively combine theory and practice. According to actual needs, the art ability competition mechanism can be improved, and students can choose items or several items to participate in the competition after systematic learning, so as to show themselves and discover deficiencies, so as to improve the evaluation system. The reform of the evaluation method will inevitably bring about the learning style of students. Change, breaking through the traditional learning method that emphasizes theory and ignores practice, can enable students to generate new recognition in terms of professional knowledge, professional skills and professional attitude, so as to comprehensively improve their own comprehensive quality, while also effectively improving their artistic ability. The specific results are shown in Figure 2. It can be seen from the figure that most teachers have a low level of artistic ability. Although most teachers have more or less received art courses during their school years, they are still slightly inadequate in the field of artistic ability. 63.5% of the people chose "Very important", which shows that most managers have strict requirements for teachers in terms of "artistic expertise".

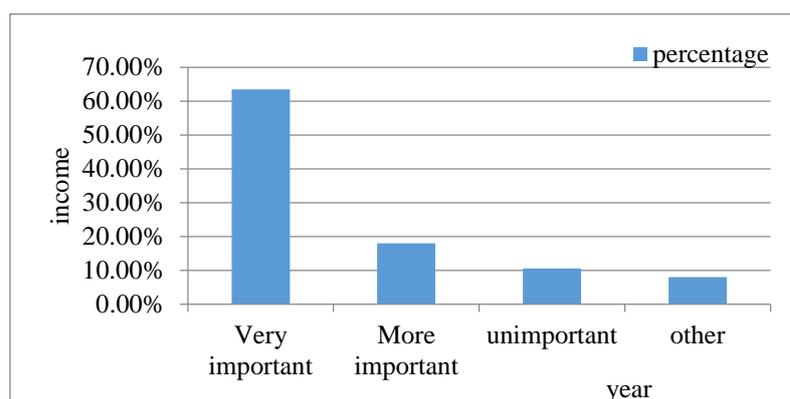


Figure 2. Teacher questionnaire

## 5. Conclusion

Although this article is based on big data-based research on the artistic ability training of preschool education majors in adult higher education in colleges and universities, there are still many shortcomings. The academic leader of the preschool education major of adult higher education must not only have extensive theoretical knowledge, but also have solid artistic ability and accomplishment. To promote the healthy development of schools, the application and selection of teachers need to be carried out according to the actual needs of the school. There are still many in-depth content worth studying in the research on the artistic ability training of the preschool education major of adult higher education based on big data. There are still many steps to study the artistic ability analysis of adult higher education because of space and personal ability. In addition, the actual application effects of the related experiments of artistic ability training can only be compared with traditional models from the level of theory and simulation.

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## Data Availability

Data sharing is not applicable to this article as no new data were created or analysed in this study.

## Conflict of Interest

The author states that this article has no conflict of interest.

## References

- [1] Yan Z, Wang H, Wang C, et al. Theoretical and Experimental Analysis of Excessively Tilted Fiber Gratings. *Optics Express*, 2016, 24(11):2107-2115. <https://doi.org/10.1364/OE.24.012107>
- [2] Bruce T F, Slonecki T J, Wang L, et al. Front Cover: Exosome Isolation and Purification via Hydrophobic Interaction Chromatography Using a Polyester, Capillary-Channeled Polymer Fiber Phase. *Electrophoresis*, 2019, 40(4): NA-NA. <https://doi.org/10.1002/elps.201970031>

- [3] Botero W G, Pineau M, Janot, No émie, et al. Isolation and Purification Treatments Change the Metal-Binding Properties of Humic Acids: Effect of HF/HCl Treatment. *Environmental Chemistry*, 2018, 14(7):417. <https://doi.org/10.1071/EN17129>
- [4] Sonia Escandón-Rivera, Martín González-Andrade, Bye R , et al. Correction to  $\alpha$ -Glucosidase Inhibitors from *Brickellia cavanillesii*. *Journal of Natural Products*, 2016, 80(1):233. <https://doi.org/10.1021/acs.jnatprod.6b01120>
- [5] Hui C, Yayue L, Yang N, et al. Polyketides from the Mangrove-Derived Endophytic Fungus *Nectria* sp. HN001 and Their  $\alpha$ -Glucosidase Inhibitory Activity. *Mar Drugs*, 2016, 14(5):86. <https://doi.org/10.3390/md14050086>
- [6] Chen S, Liu Y, Liu Z, et al. Isocoumarins and Benzofurans from the Mangrove Endophytic Fungus *Talaromyces Amestolkiae* Possess  $\alpha$ -Glucosidase Inhibitory and Antibacterial Activities. *RSC Advances*, 2016, 6(31):26412-26420. <https://doi.org/10.1039/C6RA02566H>
- [7] Kazem H A, Chaichan M T. Experimental Analysis of Solar Intensity on Photovoltaic in Hot and Humid Weather Conditions. *International Journal of Scientific and Engineering Research*, 2016, 7(3):91-96.
- [8] Franco A, Fantozzi F. Experimental Analysis of a Self Consumption Strategy for Residential Building: The Integration of PV System and Geothermal Heat Pump. *Renewable Energy*, 2016, 86:343-350. <https://doi.org/10.1016/j.renene.2015.09.030>
- [9] Salem J , Champliaud H , Feng Z , et al. Experimental Analysis of an Asymmetrical Three-roll Bending Process. *International Journal of Advanced Manufacturing Technology*, 2016, 83(9-12):1823-1833. <https://doi.org/10.1007/s00170-015-7678-x>
- [10] Basseri H R , Dadi-Khoeni A , Bakhtiari R , et al. Isolation and Purification of an Antibacterial Protein from Immune Induced Haemolymph of American Cockroach, *Periplaneta americana*. *Journal of Arthropod-Borne Diseases*, 2016, 10(4):519-527.