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Reconstructing the Practical Curriculum of High School Preschool Education in the Era of Artificial Intelligence

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Abstract: Under the current teacher training system, higher education institutions have become an important institution for kindergarten teacher training and provide an important guarantee for preschool teacher construction. Whether higher education institutions can provide high-quality teaching staff mainly depends on the preschool education curriculum. The purpose of this paper is to study the reconfiguration of the practical curriculum of preschool education majors in higher education based on the era. As future preschool teachers, preschool education students need to have the ability to appreciate and perform art. This paper analyzes the introduction of AI technology in the era of artificial intelligence in order to achieve personalized dance teaching supported by multiple teaching methods, and the results of data analysis show that teachers and students are very positive about the artificial intelligence dance teaching platform constructed in this study, especially in terms of the innovation of the construction space, the The results of data analysis show that teachers and students are very satisfied with the AI dance teaching platform constructed in this study, especially in terms of the innovation of construction space, teaching efficiency, sense of time and space, teaching evaluation, learning style and reflection, and functionality.

1. Introduction

The pedagogy course of secondary preschool education is the key to improve students' practical ability. Secondary schools must change their teaching ideology, fully consider the needs of the early childhood education market, pay attention to the improvement of education quality, and increase the cultivation of practical teaching to provide a strong guarantee for the cultivation of preschool education talents. In order to introduce how to optimize the practical teaching of preschool education curriculum in secondary vocational schools [1-2]. With the progress of technology, physical, mental, and intellectual labor is gradually replaced by artificial intelligence, labor skills gradually develop in the direction of diversification, and consciousness and innovation abilities become increasingly important [3-4].

Mustafa Köse based on the current research on the implementation of the curriculum in higher education institutions. Based on the analysis of the current state of PCK content, concepts and

composition, the selection of course content, course organization and implementation, and course evaluation are explored and practiced to enrich and innovate teaching models, improve teaching outcomes, and enrich students' learning and lives [5].Melissa N explores the influence of gender identity on professional identity from a narrative perspective, using males in preschool education as an example. The results show that, on the one hand, men attempt to undermine the maternal character of the teaching profession in order to achieve a professional identity for teachers. On the other hand, it is the integration of the teaching profession group, while avoiding feminization and maintaining the unity of gender identity and professional identity. It is clear from this that the feminization of the teaching profession can only be changed by fundamentally deconstructing the negative effects of traditional gender culture [6]. Practical teaching is an important part of preschool teacher training in teacher training institutions. However, there is a lack of understanding of practice teaching and a lack of in-depth research on practice teaching in secondary vocational schools. In this regard, Maria Xanthopoulou suggested reflecting and reforming the existing practice teaching model. Based on the scientific definition of practical teaching in secondary vocational schools, Maria Xanthopoulou proposes a new "four-integration" model of practical teaching by analyzing the current situation of preschool education [7].

Based on the analysis of the changes in the types of talent demanded in the field of early childhood education and educational concepts in the context of intelligent education, this paper is comprehensive and explores the development of preschool education majors in the era of artificial intelligence, and gives reform suggestions for the cultivation of talent in preschool education majors in vocational colleges in terms of talents training objectives, curriculum organization, teaching methods and teaching evaluation[8-9].

2. A Study on Reconstructing the Practical Curriculum of High School Preschool Education

2.1. Preschool Education Majors in the Era of Artificial Intelligence

In addition to the selection of curriculum content for preschool education majors based on the needs of positions in the field of early childhood education, the current social life environment should also be fully considered. Knowledge of childcare, art skills, knowledge of early childhood management, knowledge of early childhood education theory, and knowledge of the five major fields are important, but with the development of artificial intelligence[10], Internet of Things, cloud computing and big data, students must learn to establish a good relationship with digital and technology, while some advanced kindergartens have emerged with intelligent robot-assisted teaching aids, 3D printing courses, robot education, etc[11]. In order to cultivate talents who are more adaptable to the development of ECE industry, preschool education major curriculum should try to add digital, such as blended learning, fun programming for young children, computer operation instruction for young children, 3D printing curriculum for young children, VR curriculum, etc[12].

Preschool education majors should pay attention to cultivating students' creative thinking and imagination when conducting teacher training. For example, in the teaching process of preschool education majors' music theory and sight singing, early childhood song accompaniment, playing and singing, and other related courses, electronic class creation courses can be integrated to encourage students to use music production software such as FLStudioMobile to create music of their own style, interest and mood[13].

2.2. Countermeasures for Reconstructing Practical Courses

(1) Raise students' awareness of practical orientation and cultivate the initiative

To cultivate students' initiative, the first step is to improve students' identification with the role of early childhood teachers and develop beliefs about learning. Preschool students must realize that the training of early childhood teachers involves not only skill development, but more importantly, becoming reflective practitioners, improving their practical skills, appreciating practical wisdom, and learning to reflect[14]. The study of preschool education is not simply about learning theoretical knowledge or acquiring practical skills. Students need to take the initiative to learn the curriculum of preschool education and understand its important role. At the same time, students need to gradually change their learning methods of education courses, combine with teachers' interpretation of cases, videos, and theories in classroom teaching, gradually understand the theoretical knowledge of education, and gain a sense of achievement in learning[15].

(2) Build an evaluation system that focuses on preschool education practices

Evaluation has an important role in supervising and guaranteeing students' learning outcomes and teachers' teaching effectiveness[16]. To achieve teaching goals, it is necessary to understand the process of students' learning through teaching evaluation and measure whether students are constantly moving toward their goals. Specifically, in the classroom, an evaluation system that uses preschool practices and student development as indicators should be established. First of all, classroom instruction should identify specific, clear, and feasible instructional goals. Teaching evaluation objectives include professional identity, cognitive ability, knowledge structure, and student traits. The classroom teaching evaluation of practice-oriented education courses should focus on examining students' practice performance. When evaluating practice performance, a variety of evaluation methods can be flexibly chosen, with emphasis on process evaluation and on students' progress in the classroom[17].

(3) Improving teachers' practice ability

To improve the level of practice, teachers must go deep into the kindergarten education and teaching site, experience rich educational practices, understand the characteristics of young children, understand the situation of kindergarten curriculum and teaching reform, obtain practical knowledge from new curriculum resources, enrich kindergarten curriculum content, and enable the organic combination of theoretical knowledge and practical experience to promote university teaching reform[18]. It is important to note here that teachers' in-depth kindergarten emphasizes that teachers' teaching activities must be rooted in the actual situation of preschool education, rather than requiring teachers to work in childcare institutions. When conditions permit, teachers may go to the preschools themselves to carry out educational activities.

3. Investigation and Research on Reconstructing the Practical Curriculum of High School Preschool Education Major in the Era of Artificial Intelligence

3.1. Online Platform Construction

On the online dance teaching platform for preschool education majors, teachers can guide and help students to learn online dance teaching resources, answer students' questions, and make assessments, as well as interact with students. Artificial intelligence teachers, based on students' questions, make precise learning resources pushes. Students follow the teacher's guidance to learn in a planned manner, view their work, ask questions, and interact with the teacher and students, etc., thus effectively conducting blended dance courses. Through the demand analysis of the online dance teaching platform, the platform adopts a three-layer architecture model of business layer, representation layer, and data layer.

After entering the intelligent dance training system, students can first log in through facial recognition or user name, and then select specific movements to enter the simulation training. During the simulation training, the camera will collect real-time training data that can be refined

after the training, the training video will provide real-time information about the training report through the human behavior analysis engine, while the training data will be entered into the database and a statistical analysis report will be prepared.

3.2. Integration of Technologies

The XBOXONEKinect Body 2.0 camera will be used in the basic support layer, while the intelligent interactive screen will be used as the medium of technology conduction. Intelligent technologies such as face recognition are responsible for sensing and identifying different subjects. In the intelligent service layer, it mainly provides technical support for the realization of hybrid dance teaching. In the pre-class and post-class stages, AI technology mainly provides monitoring of the learning process, as well as visualization data and process learning data for teachers and students to make reference. In the in-class stage, AI technology is mainly reflected in the intelligent dance training system, and the specific application process of this system is shown in Figure 1.

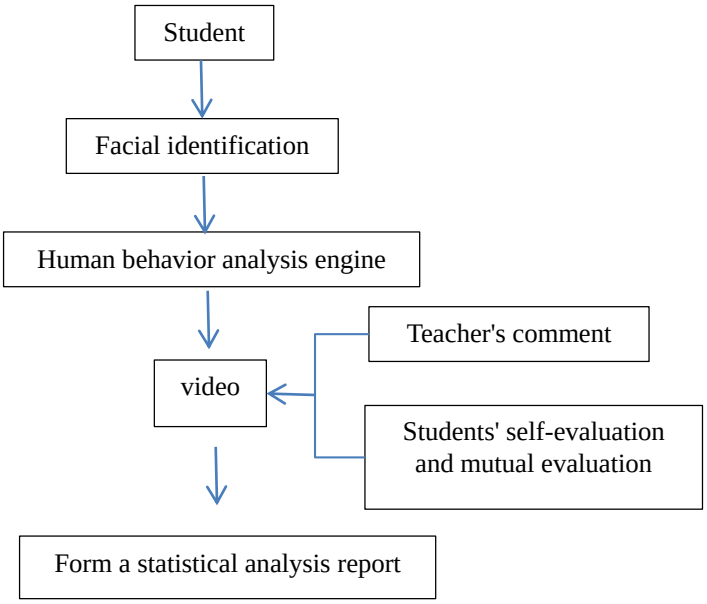

Figure 1: Specific application process.

4. Analysis and Research on the Effectiveness of Practical Courses of High School Preschool Education

This questionnaire adopts the survey method of on-site questionnaire filling, randomly inviting to select secondary school, preschool education majors who have experienced the use of an artificial intelligence dance teaching platform in the second year of secondary school students, inviting them to participate in the filling, through understanding and analyzing the students' personal experiences and feelings, in order to investigate and explore the user experience and communication appeal points, and provide a basis for improving the platform. A total of 165 subjects were invited to this experiment, of which the valid questionnaire was 132, and the survey was conducted in October 2021, and the results of the questionnaire were analyzed econometrically using SPSS25. And t-test was conducted. The t-test formula used in this paper is shown below.

$$t = \frac{\overline{X} - \mu}{\frac{\sigma X}{\sqrt{n}}} \tag{1}$$

$$t = \frac{\overline{X_1} - \overline{X_2}}{\sqrt{\frac{(n_1 - 1)S_1^2 + (n_2 - 1)S_2^2}{n_1 + n_2 - 2}(\frac{1}{n_1} + \frac{1}{n_2})}} \tag{2}$$

Where equation (1) is a single overall test and equation (2) is a double overall test .

The factors after conducting the treatment can better express the application of the platform. See Table 1. For the second-year preschool students in secondary school, the use of the AI dance teaching platform had a great impact on their creativity, teaching efficiency, sense of time and space, teaching evaluation, learning style and learning reflection in the preschool professional practice course, among which "creativity" was the most important experience. Innovation" is the most important experience. However, in terms of teaching content, data, and immersion, learners gave relatively low experience scores, as shown in Figure 2. This is mainly because the platform has been built for a short period of time, and many learners have not yet had much experience with it, and more psychological evaluation comes from more intuitive feelings.

Table 1: Results of factor analysis

Name	Ranking	F1	F2	F3
Teaching efficiency	1	0.81	0.52	0.28
Novelty	2	0.75	0.41	0.29
Interactivity	3	0.72	0.41	0.25
Teaching evaluation	4	0.68	0.38	0.24
Functionality	5	0.46	0.24	0.18
Data property	6	0.38	0.21	0.22
Operability	7	0.22	0.18	0.25
Immersion	8	0.21	0.15	0.19
Learning reflection	9	0.18	0.13	0.14

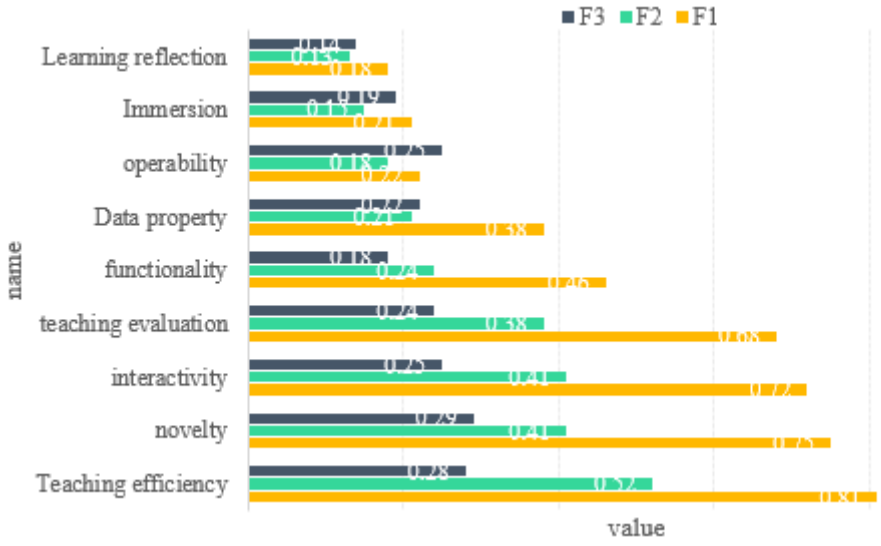

Figure 2: Effect of practical courses.

5. Conclusions

How students experience the special nature of early childhood education, learn practical knowledge, cultivate practical skills, and develop practical wisdom in classroom teaching is an important part of preschool education students' training. In this paper, we interpret the connotation of "practice orientation" and propose countermeasures to manifest it in classroom teaching. The whole study not only reflects the application and development of "practice orientation" in classroom teaching, but also realizes the systematic construction of education curriculum teaching. The cultivation of preschool students' practical awareness and ability, reflective awareness, and ability has always been an important issue affecting students' development, and this study is of great practical significance for improving the effectiveness of teaching in preschool education courses. Of course, the article still needs more comprehensive and in-depth thinking and practice on many issues. Because of my limited research ability and relatively few resources at my disposal, the research is not deep enough and some theoretical thinking is superficial, so it does not fully achieve the expected goal of this study:The problems responded to in the study are the problems of preschool education majors in the professional curriculum setting in case schools, which are representative but still not comprehensive enough to fully reflect the problems existing in the preschool education curriculum setting in other similar institutions. The problems are representative but still not comprehensive enough to reflect the problems in the curriculum of other similar institutions. Optimization measures will be proposed for these shortcomings to further improve preschool teacher training.

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