

On the Classroom Design of the Concept of Teaching Students in Accordance with Their Aptitude in the Piano Education of Traditional Colleges and Universities

Liyuan Luo^{1,2}

¹Phd in Education, Cavite State University, Cavite, Philippines

²Department of Dance, Sichuan Conservatory of Music, Chengdu, China

lumio.3ly12@hotmail.com

Keywords: Teach Students in Accordance with Their Aptitude, Piano Education, Teaching Methods, Classroom Design

Abstract: Education occupies an important position in the process of national development. It provides necessary personnel training and intellectual guarantee for national development. With the rapid improvement and development of China's higher education level and the continuous deepening and improvement of the reform of education and teaching activities, it is generally recognized that comprehensive learning of foreign advanced theories and teaching methods is an important part of learning. Piano teaching (PT) is one of the most important teaching contents in the training and teaching of music courses in colleges and universities (CU). Therefore, its teaching work plays an important role in music education and music appreciation for contemporary audiences. At the same time, teaching students in accordance with their aptitude (TSTA) is an important education and teaching principle handed down in ancient China, with a history of more than two thousand years. At the same time, TSTA is an important principle of education and teaching. After years of baptism, they still radiate new vitality in the education reform. Teaching students that are in line with the development of their individuality can more effectively promote the best development of everyone. Therefore, in a sense, TSTA is an important strategy for PT in modern CU. Therefore, to some extent, TSTA can be said to be an important strategy for piano education (PE) in modern CU. This article adopts the questionnaire survey method and data analysis method, intends to use the concept of TSTA, break the traditional university education model, and provide new research ideas and methods for its classroom design. According to the survey results, most of the interviewees agree that the concept of TSTA is applied to the design of PE in CU, and will be of greater help to teaching.

1. Introduction

With the obvious improvement of the overall level of college music education, teaching concepts are constantly updated. As one of the forms of music education, PT is also highly valued by many schools and parents. To implement the new educational concepts in educational practice and embody people-oriented, teachers are required to teach students in accordance with individual differences. TSTA, as a traditional educational thought, emphasizes the attention to the diverse development of students' personalities. "Teach students in accordance with their aptitude" as a teaching principle, is very common in the application of teaching practice, and then guides the formulation of teaching guidelines and teaching policies. To a large extent, it has promoted the development of education and made PE in CU full of vigor.

From the current point of view, the academic circles have made abundant research results on the application of the concept of TSTA to high-efficiency PE. For example, Ruan Youyou pointed out that the people-oriented teaching system and the teaching philosophy of TSTA, with students' educational practice activities as the core, help students gain knowledge and skills in their study and practice, which is conducive to achieving the goal of improving the overall quality of PE in CU[1]. Liu Yunjun believes that CU continue to improve teaching methods and propose a mature teaching concept, and teach according to the different characteristics of each student, so that each student can be personalized, and also improve the quality and efficiency of teaching [2]. Shao Jing pointed out that the homogeneity of the traditional PT model is undoubtedly a major obstacle to the development of education, at least in terms of teaching planning and TSTA will be greatly affected. To ensure the advancement and efficiency of PT, it is necessary to make innovative and modern adjustments to the existing teaching model under the guidance of scientific and clear teaching goal[3]. Therefore, this article explores how to carry out the classroom design of PE in CU based on the concept of TSTA, which meets the requirements of renewing the concept of music teaching.

This article mainly discusses these aspects. First of all, some content related to TSTA is introduced. Then, it elaborates on PE in CU. In addition, it also introduces the application of association rule algorithm in the concept of TSTA and PE in CU. Finally, launch a questionnaire survey and study, and draw the survey results and analysis conclusions.

2. On the Classroom Design of the Concept of Teaching Students in Accordance with Their Aptitude in the PE of Traditional Colleges and Universities

2.1 Teach Students in Accordance with Their Aptitude

The definition of TSTA is not clear. It can be used in teaching concepts, teaching principles, or in-depth teaching policies. Generally speaking, it is logical to position its goal on the overall development of students, and it also meets the basic requirements of quality education. At the same time, it is also necessary to handle the relationship between collective teaching and individual teaching. Therefore, how to achieve the perfect combination of the individual and the collective and achieve the development of individuality is a problem worthy of people's attention [4-5]. The realization of personality development is shown in Figure 1.

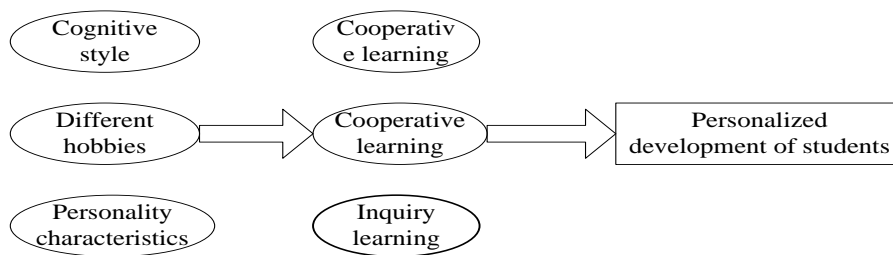


Figure 1: Realization of Personality Development

The principle of TSTA has long played an important role in the formulation of education policies and guidelines. It is not an inevitable choice of technology or method, but it generally affects teaching behavior.

TSTA has a long history and is the essence of educational thought. In the history of education development at home and abroad, it has always been an educational concept implemented and used by educators from all over the world. As early as the Spring and Autumn Period, the educator Confucius first used this concept to teach. After this, the educators of all generations also attached great importance to this idea. In foreign countries, this concept is also emphasized, and the idea of maximizing strengths and avoiding weaknesses has been put forward. Some scholars believe that there are differences in student abilities, and teaching should be carried out differently according to the specific circumstances of the student's age, characteristics, knowledge level, and acceptance ability [6-7].

This teaching mode not only pays attention to the overall development of students, but also takes into account the development of teaching, emphasizing the main body status of students. Therefore, in the design of the teaching model, the development needs of different learners are highlighted, and the needs of the current social training for all-round development are also met, so as to realize that the content of the subject should be constantly innovated and developed according to these needs, and can be obtained in the practical activities of today's education and teaching for larger development.

2.2 College Piano Education

Although domestic PT has undergone a complicated process of social and historical changes, with the continuous development and expansion of piano courses, this instrument has attracted more and more attention and love from the public, which has also laid a good foundation for the spread and development of piano.

Since the development of PE in CU, teaching, creation or performance have been reformed and improved to a certain extent. So far, PT has formed a huge mass foundation, and its teaching network structure has reached an unprecedented level of perfection and scale, and it has been continuously improved and developed in a standardized and scientific direction. In addition, the increase in international music and cultural exchanges has also broadened the horizons of teachers and students.

At present, such problems still exist in PT in CU. One is the lack of continuity between courses and class schedules. Most CU adopt a "one-to-one" teaching method, and most of them have less class hours, which leads to long feedback time, discontinuous and unstable teaching activities, and reduces the effectiveness of piano lessons. The second is to overemphasize performance skills while ignoring musical expressiveness. In ordinary piano practice, students only pay attention to technical

training, and over-emphasize the technical training of fingers, wrists and arms, while ignoring the profound connotation of musical works. The third is that the knowledge learned does not meet the needs of actual work. The knowledge acquired is far from the needs of actual work, knowledge and practical applications cannot be well connected, and students have poor adaptability to some basic music education work [8-9].

The development of PT in China and the production of piano music have gone through a long time. Therefore, the piano has become popular in China and has become one of the most influential musical instruments, and it has also achieved unprecedented development. More than a hundred years ago, the impact of piano lessons was minimal, but due to the continuous efforts and struggles of Chinese music teachers, piano lessons survived with their unique charm and enduring vitality. Under the active leadership of the Chinese government, PE has continued to develop, keeping up with the pace of reform and opening up, and achieving better development. Since the founding of the People's Republic of China, especially after the reform and opening up, piano courses have received great attention and attention, and PT has undergone great changes, especially in terms of system construction, competitions, and teachers. Among the many music activities, none can attract such fans like the piano. It is precisely because of the special charm of the piano that it has more followers, so that the piano course can be inherited and developed, and gradually move towards the normal direction of development [10-11].

2.3 Application of Association Rule Algorithm in the Concept of TSTA and Piano Education in CU

Association rules show the dependency between two transactions. Assuming that there is a connection between two or more transactions, then one transaction can be predicted by another transaction with a certain probability. The purpose of association rules is to find the relationship between different attributes from a multi-attribute record. Association rules show the dependency between two transactions. Assuming that there is a connection between two or more transactions, then one transaction can be predicted by another transaction with a certain probability. Use the association rule algorithm to find out the inner connection between the concept of TSTA and PE in colleges, so as to better apply the concept to piano classroom design and inject vitality into PE in colleges. The purpose of association rules is to find the relationship between different attributes from a multi-attribute record. The core of exploring the problem of association rules is actually to find the rules that meet the minimum trust degree in ordinary sentences. Therefore, in general, exploring association rules mainly includes the following two steps: finding all common sentences and finding all strong association rules. When evaluating association rules, support and trust are important parameters, and they reflect the versatility of association rules in all transactions [12]. The calculation method is as follows.

$$Support(A \Rightarrow B) = L(A \cup B) = \frac{|\{R: A \cup B \subseteq R, R \in F\}|}{|F|} \times 100\% \quad (1)$$

$$Confidence(A \Rightarrow B) = L(B|A) = \frac{|\{R: A \cup B \subseteq R, R \in F\}|}{|\{R: A \subseteq R, R \in F\}|} \times 100\% \quad (2)$$

Among them, A and B are both subsets of the full item set, L is the probability, $L(A \cup B)$ is the probability that all transactions contain A and B at the same time, F is the transaction database, and R is the set of items.

3. Questionnaire Survey of the Application of the Concept of Teaching Students in Accordance with Their Aptitude to the Classroom Design of Piano Education in Colleges and Universities

3.1 Questionnaire Design Process

In order to better understand the application of the concept of TSTA in PE in CU, this questionnaire survey selected 80 teachers and students from the K Conservatory of Music as the subjects of the survey. Through the issuance of online questionnaires or paper questionnaires, the collection and quantitative analysis of the information filled in by users are carried out to draw conclusions of the questionnaire.

(1) In the preliminary preparation of the questionnaire, the number of questions should be as concise as possible to avoid fatigue of the interviewees.

(2) The questionnaire is released. Questionnaires were distributed through online questionnaires, on-site questionnaires, and inviting friends to help ask friends and students around them. A total of 80 questionnaires were distributed, 80 valid questionnaires were returned, and the questionnaire recovery rate was 100%.

(3) Questionnaire analysis. Organize the collected questionnaire information to get the required information data. The results of the questionnaire were analyzed. The results of the analysis included the respondents' opinions on the application of the concept of TSTA to the design of PE in CU. Some of the results obtained from the questionnaire are as follows.

3.2 Questionnaire Survey Content

The first part is a survey of 80 interviewees on the content of classroom design including teaching objectives, teaching activities, teaching resources, and teaching methods, and the application of the concept of TSTA to PE classroom design in CU.

The second part is to sort out the information collected in the questionnaire and understand the respondents' views on the application of the concept of TSTA to the design of PE in CU. Part of the questionnaire survey results are as follows.

4. Questionnaire Analysis of the Application of the Concept of Teaching Students in Accordance with Their Aptitude to the Piano Education Classroom Design in Traditional Colleges and Universities

In this questionnaire survey, the interviewees' views on the application of the concept of TSTA to the design of PE in CU were investigated in terms of teaching objectives, teaching activities, teaching resources, and teaching methods. The survey results are shown in Table 1.

Table 1: Views on the Application of the Concept in the Design of PE Classes in CU

Project	Teaching objectives	Teaching resources	Teaching activities	Teaching method
Very supportive	9	7	8	10
Supportive	8	9	7	8
Neutral	2	3	3	2
Not supportive	1	1	2	0

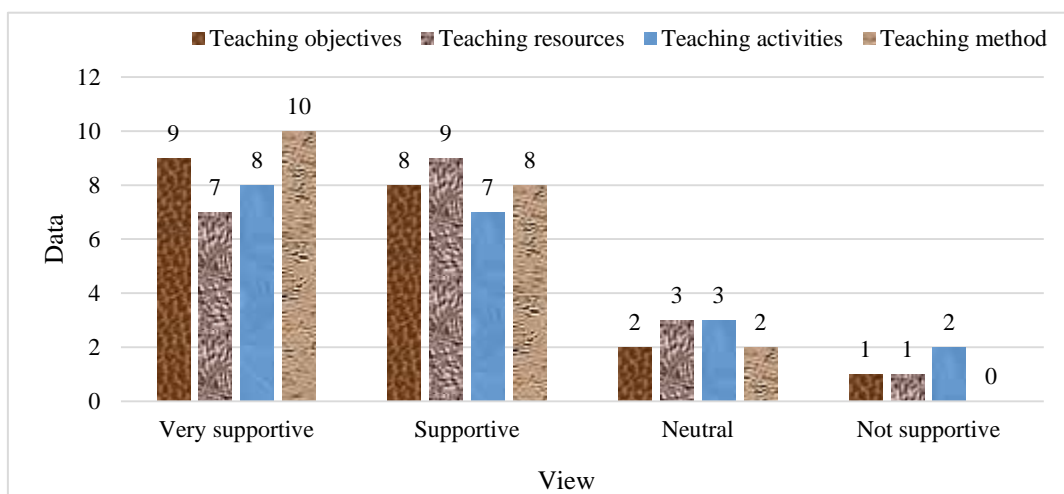


Figure 2: Views on the Application of the Concept in the Design of PE Classes in CU

It can be seen from Figure 2 that a total of 66 respondents among the interviewees expressed support for the concept of teaching students according to their aptitude in the design of PE in CU, while only 4 expressed their disapproval. It can be seen that most of the interviewees agree that the concept of TSTA is applied to the design of PE in CU, and will be of great help to teaching.

5. Conclusion

TSTA is a classic teaching principle, and its ideas have a long history and leave a deep impression on people. And this idea has been widely inherited and developed in the field of education. With the progress and development of the times, the educational background and educational concepts are constantly changing, and the connotation is also the same. At the same time, advanced education theories and teaching methods are an essential part of the discipline construction, and PT is an international general art discipline. For PT in CU, higher education has put forward new demands on it. Therefore, this article discusses the concept of TSTA in the classroom design of traditional college PE, which has important research significance and application value.

References

- [1] Ruan Youyou. Analyze the application of the concept of teaching students in accordance with their aptitude in piano teaching in colleges and universities[J]. 2021(2019-18):198-199.
- [2] Liu Yunjun. The application of the concept of teaching students in accordance with their aptitude in piano teaching in colleges and universities[J]. Times Education, 2017, 000(018): 28-28.
- [3] Shao Jing. The application of modern teaching mode in piano teaching [J]. Contemporary Educational Practice and Teaching Research (Electronic Journal), 2018, 000(007):960-961.
- [4] Ruan Youyou. Exploring the application of the concept of teaching students in accordance with their aptitude in piano teaching in colleges and universities[J]. Northern Music, 2019, 039(018):198-199.
- [5] Liu Ximei. On the application of the concept of teaching students in accordance with their aptitude in vocal music teaching in colleges and universities[J]. 2021(2016-8):186-186.

- [6] Lu Chenxi. *How to realize the concept of teaching students in accordance with their aptitude in piano teaching in colleges and universities*[J]. 2021(2014-14):165-165.
- [7] Wang Qi. *The application and implementation of teaching students in accordance with their aptitude in piano teaching in colleges and universities*[J]. 2021(2017-12):107-107.
- [8] Chen Mo. *On emotional education in piano teaching in colleges and universities*[J]. *Road to Success*, 2018, 000(002):19-19.
- [9] Han Shaonan. *Teach students in accordance with their aptitude, explore new ideas for piano teaching in normal universities* [J]. 2021(2018-7):151-151.
- [10] Tao Xin. *Exploration and research on the diversified teaching mode of piano teaching in colleges and universities*[J]. *Yangtze River Series*, 2017, 000(035): 20-20.
- [11] Yu Hui. *Analysis of piano teaching based on teaching model innovation*[J]. 2021(2016-16):146-146.
- [12] Hu Yuzhi. *Discussion on piano teaching mode under the reform of school-enterprise cooperative teaching* [J]. *Art Science and Technology*, 2017, 030(001):360-361.