

## Research on the Innovation Path of Piano Teaching in Colleges and Universities in the "Micro-era"

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**Abstract:** The "micro-era" is a new era of Internet development, which has brought about earth-shaking changes in people's lives. This paper discusses the opportunities and challenges brought by the "micro-era" education innovation to the piano teaching in colleges and universities, as well as the "micro-era" college piano teaching innovation path, and puts forward the feasibility of the college piano teaching method under the "micro-era". path. The purpose is to realize the upgrading of the piano professional teaching from the teaching concept, teaching content, teaching methods, technical means to evaluation system through the research of this paper.

### 1. Introduction

To this day, the term "micro-era" has a different opinion and there is no fixed answer. In the face of rationality

In the article "Micro-era", Lin Qun first defined the term "micro-era". He believes that "micro-era" is based on the digital technology of information, using digital communication technology, using audio, video, text, and images. In a variety of ways, through the new, mobile and convenient display terminals, a new era of communication with real-time, interactive, and university-based communication activities is carried out. In the "Micro-era" and "Minimal Education", Yuan Wei puts forward that the "micro-era" is "using micro-thought as the cultural background, micro-technology as the material basis, micro-media as the communication platform, and short and refined as the operating characteristics." The era [1-2].

When the "micro-era" is coming, how should college music education embrace the revolution of the times caused by the media revolution? As the most representative piano teaching in higher music education, how to change its own teaching mode and apply new technical means to create a new type of music Teaching mode, ultimately improve the efficiency and quality of education and teaching?

### 2. Educational Innovation in the "Micro-era"

The "micro-era" has changed the way people think about information and knowledge. As the time of debris increases, the knowledge of debris begins to explode. The characteristics of fixed time, fixed location, and fixed source in the traditional learning mode have undergone subversive changes in the "micro-era". Under this environment, the new micro-teaching mode "micro-teaching" and its product "micro-course" were born, which produced many new forms of online teaching, which enabled the open and shared education and teaching concepts to flourish [3]. The two most important forms are Khan Academy and Coursera, which represent the resources of Mooc. Their emergence has greatly promoted the openness of educational resources and also broke the limits of geography and stratum. Let more people who expect to gain knowledge have the opportunity to re-educate [4].

The educational non-profit organization Khan Academy, founded in 2006 by Indian-American American Salman Khan, provides free high-quality learning services to online learners around the world. Its biggest feature is to use the touch panel and recording to record the contents of the professor and upload it to the line [5]. The length of the course of about 10 minutes adapts to the rapid development of this era, and is also the most concentrated time period for people to learn more efficiently through multiple fragmentation time [6]. In order to meet the needs of more people, Khan Academy's curriculum is arranged in tandem from easy to difficult, and according to the

characteristics of online course learners, with the corresponding exercises to consolidate the content. The whole process of learning will be recorded by the practice system. The teacher can grasp the progress and problems of the learners through the records, and solve the problem that the traditional teaching cannot be taught according to the aptitude [7]. At the same time, its open and non-profit nature makes everyone have equal opportunities and rights.

Another representative of the for-profit teaching model is the Coursera, which is the open educational resource model of the MOOC. It was an educational technology company run by Stanford University Daphne Kohler and Andrew Engel in 2012. It initially had four top US universities as partners, including Stanford University, Princeton University, University of Michigan, and the University of Pennsylvania [8]. Later, they collaborated with the world's top universities to offer fee-based online courses, each offering 8-12 minutes of video viewing. Interactivity questions and after-school quizzes have also been added to the video to help students review the learning content, while solving the problem of excessive emphasis on "teaching" and lack of interaction in traditional teaching, and also increasing students' sense of participation. After the test is submitted online, the feedback can be obtained immediately, which improves the timeliness of knowledge acquisition. After the interactive question is answered, the student can continue to watch the video, ensuring that each student can complete each teaching knowledge in a complete and solid manner. In addition, the system also sets up peer review and community discussion, which solves the complexity and diversity of answers to humanities and social science courses, so that everyone can get the answers they want based on their own thinking patterns [9].

Nearly 50 years later, the "micro-course" appeared in China. In 2012, the first national primary and secondary school micro-curriculum competition was held by the Ministry of Education. The official website "China Micro-course Network" included micro-courses from primary and secondary school teachers in the country as the most representative primary and secondary school micro-curricular resources in China. Platform, "China Micro-course Network" is also the first platform for domestic "micro-courses" [10]. Its core resource "micro video" is generally 5-10 minutes, and its teaching style is similar to the traditional teaching mode, focusing on the transfer of knowledge and skills. It is similar to "classroom recording", the topic is not limited, and because of its lack of effective interaction with students and the media, it is essentially built and operated according to the platform concept of "resources", and the concept of "educational community" is not Can be implemented.

In summary, summed up the salient features of the "micro-course": 1) the single-segment teaching time is short, generally controlled in about 10 minutes; 2) the strong interaction, changing the traditional teaching emphasis on the "output" mode; 3) teaching content Concentration, one class focuses on one knowledge point, allowing students to absorb more effectively; 4) immediate feedback is strong, problems are solved fastest; 5) high quality resources, guarantee the quality of professors; 6) the whole process of the network, solving the time and Space restrictions.

Therefore, the "micro-course" with many advantages, as the final product of the "micro-era" education innovation, is an impact on the development of education and teaching in colleges and universities, which makes the education and teaching of colleges and universities in the new era face enormous challenges and brings them Opportunities and development prospects [11]. In this critical transition period, college education and teaching should accept new forms with an open mind, bravely embrace new science and technology, and try to establish a new micro-teaching paradigm in a new way to promote the development of education and teaching. .

### **3. The Opportunities and Challenges Brought by the "Micro-era" to College Piano Teaching**

The traditional piano teaching mode is mainly one-on-one, with a 90-minute class, and the location is fixed in the piano room of the school. The professor's method is usually based on a fixed teacher's "spoken heart". Such a model, for students, can get the most effective learning in a relatively fixed and concentrated time and place, but at the same time it will be subject to many restrictions and many problems: 1) due to the fixed time and place, teachers Or if one of the students has an emergency, the course may be cancelled; 2) because only one class per week, students will encounter problems in the

spare time, they will not be able to communicate with the teacher in time; 3) some students are Facing teachers is easy to be nervous and has psychological barriers, so that they can't really play the results of the exercises in the classroom. 4) The teachers' own performance, teaching style and knowledge system are limited, it is difficult to give students more inspiration and space [12].

This new form and technical means produced by the "micro-era" broke the constraints of traditional teaching on time and space, and enriched students' learning with more open and diversified resources. At the same time, the teachers who taught the lectures broke the original rigid. The knowledge structure uses the most convenient way and the lowest cost to get the knowledge you need. Teachers can teach students in the form of online teaching. At the same time, they can also carry out supplementary teaching in the form of "micro-courses" under the class to solve the time and geographical constraints in traditional teaching. The "micro-course" is widely spread on the Internet, and it also gives teachers the opportunity to study at any time and any place, truly learning for life and teaching.

#### **4. "Micro-era" College Piano Teaching Innovation Path**

So far, piano "micro-teaching" has not yet formed a systematic teaching method. From pianists to college piano teachers, they are trying to explore the possibility of "micro-teaching" piano "micro-teaching". They are moving towards micro-video [13]. Teaching path. Lang Lang, an internationally renowned pianist and music educator, has been setting up a "Lang Lang Piano Lesson" on the Internet. It has been recorded for 1-6 minutes per class. Currently, 50 lessons have been updated, covering the most basic The practice of scales and voices to practice music with certain difficulty."Olive Classical Music" and "Music Planet" also offer two types of piano online "micro-courses": 1) The first stage of the "Piano Teaching Method" in the Music Education Department of the Shanghai Conservatory of Music, Fang Baili, At present, there are 6 classes, each class is about 30 minutes; 2) The Shanghai Conservatory of Music Piano Teaching Method is a master's degree in "Singing and Singing (Singing and Playing)", which aims to improve teachers and students. The teaching efficiency of the piano has been opened for 3 lessons, each class is 15-30 minutes. The VIP sparring that has started in the past two years is an online music education platform developed by Shanghai Miaokeye Information Technology Co., Ltd. As the largest music education platform at present, VIP sparring all adopts the real-time online training of real-life teachers, focusing on solving the problem of practicing piano for 5-16 year olds. Through network technology, mobile phones, ipads and other multi-terminal coverage, allowing students and teachers to take classes anytime, anywhere.

These courses provide students and teachers of different levels and different needs with new ways of learning and teaching. They provide solutions to problems that are easy to arise in traditional learning. In view of the prone to error in the practice of practicing the piano, vip sparring breaks the geographical and time constraints with low price, high-quality teacher team and online teaching, so that every student and teacher can study at home and anytime. The teaching work allows the students to correct the mistakes in the performance in time while practicing under the class. The "Piano Teaching Method" opened by Fang Baili and the "Singing and Playing (Singing and Playing)" by Bian Li are supplementary courses for beginner piano students and teachers, similar to the form of "Webmaster Lecture". It makes the lecture a reproducible, low-threshold, mobile, convenient, fast, and flexible course, allowing more people to enjoy the benefits of the "micro-era". The Lang Lang piano class is also a kind of "network master lecture". It is aimed at the people and teachers who have a certain foundation. Let them use the latest methods in learning and teaching to improve the efficiency of learning, lay a solid foundation and improve the quality of teaching. These three cases are the first innovative path given to the problems existing in traditional piano teaching.

The second innovation path is Yamaha's Disklavier piano series. This kind of piano can play a live performance of a Disklavier piano at a certain place, and collect and synthesize data in different formats, such as audio, video and performance MIDI. Once the acquisition is complete, the information is transmitted over the network to another networked Disklavier piano for live broadcast, regardless of the distance, without affecting transmission quality and performance. All of the player's

detailed movements, including body movements such as touch and pedaling, are reproduced remotely on another Disklavier piano in perfect precision, giving the audience an immersive experience and experience. It is equipped with a sophisticated optical sensor system that accurately captures every subtle movement of the keys, hammers and pedals, accurately reproducing the speed at which the hammer strikes the strings, the depth of the pedals and the strength of the keys. The biggest advantage of this kind of piano is that it uses the Yamaha acoustic piano, so the sound and performance techniques of the piano can be presented in the original sound, and the artistic performance of the performer can be completely controlled. Its precision and good recording capabilities allow teachers and students to record and judge performances, giving students a new way to improve their musical standards. Its network remote capabilities allow teachers to teach remotely, and students have the flexibility to learn and audit remotely. The unique video synchronization technology allows the instructor to create, save and share the video teaching of the acoustic piano. Use it to conduct remote open classes and remote professional courses. At present, this technology has already reached a cooperation with the Wuhan Conservatory of Music in China and established a distance education link. This way, on another level, completely solves the problem of traditional piano teaching.

## 5. Conclusion

The "micro-era" is the inevitable result of technological progress and social development, and is also an inevitable requirement for individualized development. "Micro-video" and "micro-teaching" have opened up a new world for many learners. As a general education of music art, college piano teaching should accept the changes of the new era with an open mind and take advantage of the digital advantages of the "micro-era". At the same time, combined with the psychological state that is generally generated under the "micro-era", the new face and teaching system have become the typical case of music education in the "micro-era" colleges, and then promote the new development of music education in colleges and universities.

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