Construction of WeChat-based Piano Teaching Platform

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Abstract — **The development of network technology brings wider imaginary space for teaching techniques reforms. The research on application of WeChat as the most popular social information platform in classroom teaching is receiving increasingly more attention. This paper discusses the establishment of WeChat-based piano teaching communication platform. WeChat platform provides students with creation, communication and sharing space, broadens piano teaching approaches, enriches piano teaching modes and makes students gain larger development space. Teaching resources of traditional classroom and WeChat teaching platform are effectively integrated through self-developed external application programs. Also, classroom design and process can be rationally implemented according to teaching structure and content level. Meanwhile, we can achieve: i) online/offline teaching complementation and interaction, ii) tight integration of self-expression and teaching research and iii) embedment of classroom teaching in actual life.**

Keywords - Piano teaching, WeChat-based, communication platform

I. INTRODUCTION

The smartphone increasingly becomes popular among people. WeChat as a kind of mobile application software has communication, social communication and platform functions. Since it was launched on January 21, 2011, it has become the most popular social information platform [1]. At present, WeChat platform has been penetrated in all walks of life, including education [2]. As the functions of WeChat become gradually sound, people's life style has changed greatly. In addition, teaching mode and learning mode also have changed. The integration of information technology, mobile learning and ubiquitous learning have become hot topics in educational field. Nowadays, WeChat has become a training platform of teaching. WeChat teaching communication platform takes internet as the medium, supports text, picture, video and voice message sending and has the characteristics of fast update, fast reply, zero cost, cross-platform, mobility and instant messaging [3]. WeChat extends piano teaching to extracurricular teaching, expand the time and space of music teaching, enriches and simplifies communication mode between teachers and students and achieves real-time and non-real-time interactions. The introduction of WeChat platform to piano course and construction of WeChat-based piano course teaching mode contribute to motivating students' initiative for preview before class, improving students' active participation in classroom, promoting after-class training enthusiasm, carrying out learning guidance and training students' collaboration ability [4].

The construction and use of WeChat-based piano teaching platform are still in the initial exploratory stage, and there are many defects [5]. Thus, it is necessary to enhance construction in the aspects of discourse rebuilding and online/offline teaching coordination. (1) Weak discourse rebuilding intensity. Some teachers still consider themselves to be information hegemonists and fail to teach students vividly according to students' needs, which not just weakens online teaching effect, but also makes offline WeChat teaching platform suffer cold shoulder [6]. When WeChat teaching platform is applied to interact with students, some teachers also act as "removers" of "cramming method" and fail to teach with equal and democratic mentality. Thus, it is difficult to form the interaction atmosphere of "making the best use of the circumstances", "transpositonal consideration" and "learning while teaching". (2) Insufficient coordination of online and offline teaching. The cooperation with the same online/offline objective and same standards is the key and difficult point in the interaction process of traditional classroom and WeChat teaching platform [7]. WeChat teaching platform enhances flexibility of piano course, but this does not mean it can completely replace traditional classroom teaching or its guidance standard can become "loose". It cannot entirely consider students' subjectivity and ignore teachers' dominance. However, due to the constraint of habits, some teachers carry out discourse transformation for the contents of teaching materials and overlook students' discourses.

In this paper, WeChat is applied in music theory teaching, appreciation, singing and creation links of piano teaching. It breaks through single teaching form of traditional classroom and solves the problems of discourse rebuilding and harmonious development of teaching. For example, teachers can send course learning resources via WeChat. These resources may be classroom learning materials or extracurricular supplementary learning materials. In this way, students can consolidate what they have learned in classroom and further expand their scope of knowledge. Besides, teachers can publish assignments, check students' assignments, discover students; common problems in piano

21.1

learning and improve piano teaching effectiveness through WeChat platform. With the functions of WeChat such as video, voice message and group chatting, teachers may publish themes for discussion and mobilize students' enthusiasm for participation in piano teaching activity [8]. This paper discussed demand analysis of establishment of WeChat-based piano teaching communication platform, platform design and implementation as well as platform case study. WeChat platform can provide students with creation, communication and sharing space, expand piano teaching approaches, enrich piano teaching modes and make students obtain larger development space. The author hopes that more scholars can pay attention to WeChat platform, develop and study it deeply.

II. DEMAND ANALYSIS OF PLATFORM

WeChat-based piano teaching communication platform must be based on the rules of communication platform and learning and meet teaching and learning needs. Thus, the construction of piano teaching communication platform needs to meet the following requirements (Figure 1).

(1) Able to achieve course resource organization, publishing and management;

(2) Able to achieve course learning communication, extracurricular theme communication and other discussion and communication functions;

(3) Able to achieve assignment arrangement, uploading, checking and comment functions;

(4) Able to achieve students' work uploading, sharing and communication functions;

(5) Able to achieve activity and competition organization and management functions;

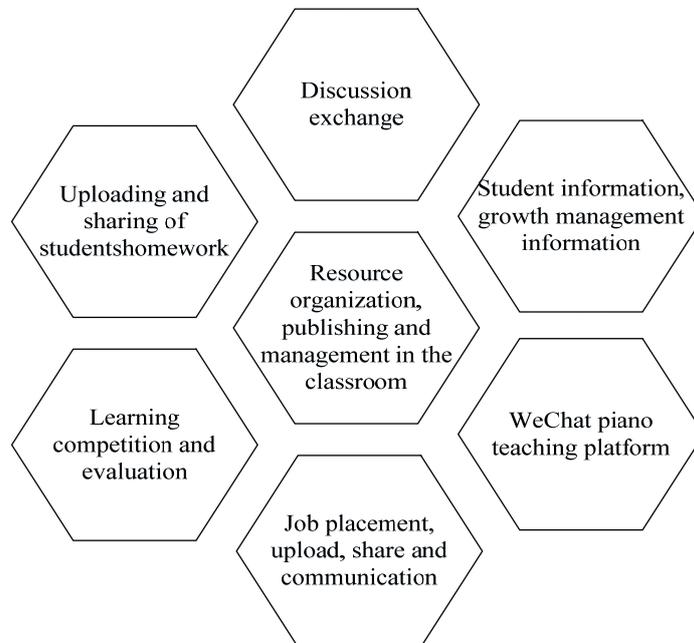(6) Able to achieve management of students' basic information, works and growth records.

Figure 1. Functional requirement functional requirement

Except the above functions, piano teaching communication platform should reach the requirements of friendly user interface, clearness, concision and convenient operation. In addition, interface customization should be available according to teaching features, which concerns user experience and is also one of the most important needs of users.

III. PLATFORM DESIGN AND IMPLEMENTATION

A. Platform design

With the help of WeChat-based development mode, the construction of piano teaching communication platform based on school teaching website can be achieved. Data interconnection between school teaching website and piano communication platform mainly refers to data interconnection between students and teachers. The course resources and be pushed to piano teaching communication platform through school teaching website, while the works and interaction data generated by interactions among teachers, students and other users on piano teaching communication platform can be stored in the school teaching website. The piano teaching communication platform which is constructed on the basis of WeChat is like an external exchange window. It can not only achieve real-time and non-real-time interactions between teachers and students, but also absorb the wisdom of vast users. In this way, piano learning

is not limited to classroom and a piano teacher, and a wider piano space can be created for students.

The piano teaching communication platform is constructed on the basis of school teaching website. Then, the design of functional framework and data interconnection is carried out according to the needs of platform users so as to satisfy users' needs.

Data interconnection among each function (as shown in Figure 2) should be achieved through construction of WeChat-based piano teaching platform. The platform takes course learning as the starting point, conducts work creation and communication, records the whole learning process and feeds back students' growth so as to reach the goals of knowledge and skill promotion, emotion and attitude change and creativity ability improvement.
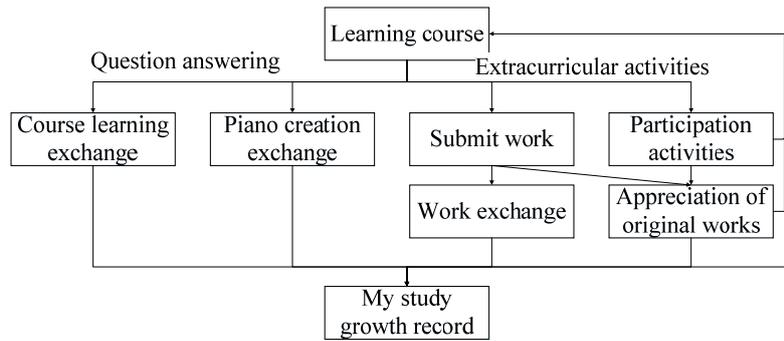

Figure 2. Data interconnection of the platform

(1) Students and teachers may establish good interactions through the platform. Students can interact and communicate with teachers through the multiple communication zones constructed in the platform, or interact with teachers through private chat function of WeChat to gain teachers' individual guidance and establish good interactions.

(2) The wisdom of other users can be absorbed and students' learning interest can improve through the platform. WeChat-based piano teaching platform allows other users to gain relevant materials and participate in platform interaction. Teachers may invite some experts or famous teachers to participate through the platform to make platform communication more diversified and improve students' learning interest and exhibition desire.

(3) Through the platform, students may be encouraged to improvise in life and submit the works to the platform for communication so as to train students' creation ability. Creation derives from life, and learning process is creation process.

(4) Through the platform, students' excellent works and other generative resources can serve as case resources to enrich course learning resources. Students' works are displayed through the platform and improved under the guidance of teachers, experts or famous teachers. The improved excellent works may serve as the generative resources of course learning to mobilize students' learning enthusiasm and initiative and enrich course learning resources.

B. Platform implementation

Modular design is conducted for platform functions in accordance with platform demand analysis, platform design philosophy and design thought. The functions users need are decomposed, concluded and settled. Both the independence of each part and information sharing are taken into account. The functional structure of WeChat-based piano teaching communication platform is composed of three central systems: resource center, communication center and personal center. The functional structure of the platform is shown in Figure 3.
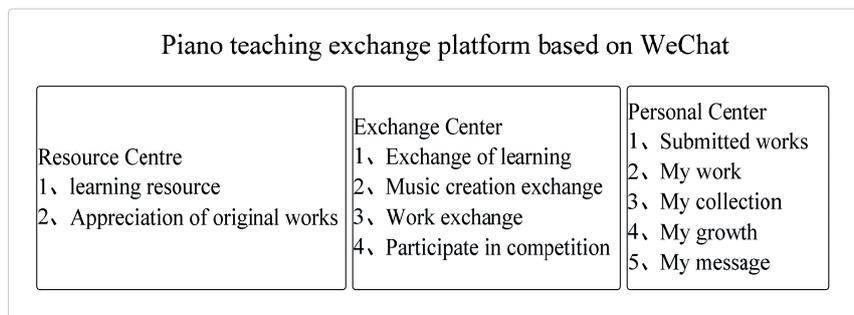

Figure 3. Functional structure of the platform

(1) Function of resource center. The resource center is mainly used to publish course learning materials. It is the zone where users learn knowledge and skills. It includes two parts: course learning resources and original work appreciation. Course learning resources are mainly course learning materials published by teachers. Teachers may publish course-related materials and assignments at a regular interval according to teaching schedule. Generally, course learning materials are published in the form of theme and micro-course for the convenience of fragmented learning. With regard to original work appreciation, masters' original works teachers recommend and students' improvised excellent works are mainly published. For students' works, teachers' comments on the works should be attached so that students can carry out cast study.

(2) Function of communication center. Just as its name implies, the communication center is the zone for users' communication and learning, including four parts: course learning communication, piano creation communication, excellent work communication and participation in activities.

The zone of course learning communication mainly provides users with the space for answering questions so that users can solve the problems in learning process and teachers can intensively answer users' questions.

In order to encourage students to create and train their creation ability, the zone of piano creation communication is especially opened for students. For piano creation, teachers may design communication theme, organize students to discuss piano creation, comment students' works and propose improvement suggestions.

The zone of work communication is mainly used to display students' works according to the assignments arranged by teachers. Students may mutual comment and exchange for the works, and teachers may comment students' works.

The function of participation in activities is to gather some piano competition activities or competitions launched by teachers. Students may participate in the competitions or exchange for the activities.

(3) Function of personal center. Through the personal center, users may submit assignments and works, check their own works, courses or work information, personal growth records and personal information etc. Thus, personal learning process records can be achieved so that students can know their learning situations.

WeChat-based teaching communication platform is student-centered, and it calls the above functions and provides rich learning materials for students. Based on the convenience of platform communication, students are encouraged to publish their works on the platform for communication and comment. This mobilizes their enthusiasm and initiative, trains their creation ability, improves their learning interest, and overcomes their fear of difficulties in face-to-face learning to sing. Moreover,

relevant piano competitions may be organized through platform to mobilize students' learning enthusiasm.

IV. PLATFORM CASE STUDY

There were two classes in a conservatory of music, and each class included 70 students. Both classes had piano course. As the leading teacher of piano course, the author chose the two classes with piano course as the experimental group, took a chapter for example and introduced WeChat platform to a class. The other class served as the control group. During teaching this chapter, the teaching objective, teaching content, key teaching points and difficult points were almost same, except the introduction of WeChat platform. The author and all students in this class opened up WeChat number, and the author became WeChat friends with most students in the class. Then, students were required to establish group and class WeChat group as well as WeChat public number. Before class, several students with strong material collection ability were required to look up relevant materials, settle the materials into special topics and send them to class WeChat group for preview by other students. In classroom, the situation was simulated through WeChat platform to guide students to grasp possible bottlenecks in discussion, and the breakthrough strategies were discussed through brainstorming. After class, the practice task was published through WeChat platform. Students were required to confirm a topic in groups and cooperated to complete the practice via WeChat. Then, the problems encountered in the process and the specific solutions formed a text and the text was submitted to WeChat public number. Students were encouraged to carry out self-evaluation and mutual evaluation through WeChat in teaching evaluation link.

Compared with the control group, the class in which WeChat platform was introduced showed significant effects in preview stage, classroom teaching process, after-class practice or course evaluation link (Table 1). First of all, the class in which WeChat platform was introduced previewed more fully, and more than a half of students completed the preview task. In the control group, less than 1/3 of students finished the preview task. In classroom teaching process, the class in which WeChat platform was introduced had more active classroom atmosphere, and their discussion enthusiasm was higher. Over 20 students actively expressed their views on the theme. In the control group, only several students actively or passively expressed their opinions. In after-class practice link, the class in which WeChat platform was introduced could take more active part in practice and submit assuagements in time. In teaching evaluation link, the class in which WeChat platform was introduced had more diversified evaluation modes, and their evaluation participation degree was higher. Besides, students learned more smoothly.

TABLE 1. TEACHING EFFECT ANALYSIS

Group	Number of carry out preview	Number of make presentations in class actively	Number of participate in after-class practice	Number of submit assignments	Number of participate in evaluation
Experimental group	44	23	51	55	58
Control group	15	2	20	32	27

(1) The use of WeChat teaching platform which supplement traditional classroom and network teaching mutually brings great changes of traditional teaching mode, forms online/offline coordinated hybrid teaching structure, and improves flexibility of traditional classroom. Meanwhile, it integrates students' fragmented information to certain degree, achieves online/offline unification, and enhances the promotion effect of students' autonomous knowledge construction ability, information identification ability and thinking logic ability.

(2) Self-expression and teaching research are tightly combined to utilize the fragmented time. Learning life is recorded through WeChat and other self-media, which is an important way for college students to express themselves and gain self-identification. WeChat teaching platform gives students a carrier to fully express themselves in classroom and also gives teachers a teaching research platform to deeply contact students' soul. Students show their views and emotions on classroom teaching and course content, observe the feedbacks from their classmates and teachers and revise themselves through introspection. In this process, teachers can study the relationship among students' ideological conversion process, rules, features, teaching content, structure and process.

(3) The thought of blending classroom teaching in real life derives from life and abstracts all kinds of appeals of individual existence. Hybrid course teaching reform based on WeChat teaching platform makes going deep in students' daily life possible. Based on knowing WeChat use and information browsing features of educational objects, the teaching contents are skillfully embedded in WeChat application platform. Social news and theoretical knowledge are put in the same field domain. Practical problems and practical problems are considered at the same time. Classroom teaching breaks away from cold shell in a moment and becomes a fresh bud.

V. CONCLUSION

The introduction of WeChat platform in piano course teaching constructs a new participative, interactive and cooperative teaching mode. Besides, case study of a course teaching serves as the basis for evaluating piano WeChat teaching platform. The experimental results show that WeChat teaching platform better motivates students' piano knowledge learning interest, improves students' classroom participation enthusiasm, cultivates their teamwork ability and trains their practical ability.

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