Design and Implementation of Online and Offline Distance Music Education Platform Based on Internet

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Abstract. The distance music education in modern society develops with the development of the information age. It is a new type of education. It has gone through the initial TV education and the education process using information technology such as computer network and multimedia technology. The main reason is that modern information technology has the advantages of flexibility, convenience, speed, etc., and will soon be able to form a food chain, thereby providing a platform for lifelong learning and a complete platform for the education system for citizens in the economic era. Distance music education is a very favorable node for education and teaching, that is, it can have a strong common performance in education and teaching, and can also play its own advantages. The origin of distance education comes from the 19th century, and through years of practice, it can exert its most powerful ability. The online and offline integrated teaching platform of the Internet is very beneficial to the development of online and offline teaching characteristics. It does not use new teaching resources to allow students to experience new education methods. To optimize the online and offline teaching methods, it is necessary to do the most basic integration. After all, online and offline teaching are two different platforms, so it is necessary to negotiate and do the corresponding work well, improve the teaching efficiency, and ensure a perfect presentation. It also requires more active interaction between teachers and students, so that teachers can exist in the classroom. With the prevalence of national education methods, every school carries out some teaching activities for the purpose of quality. However, in our actual teaching process, many problems will emerge. The establishment of the distance music education platform is for us to improve the quality of teaching, to discuss some teaching activities, to change the traditional teaching concept, to truly take students as the goal, and to improve the shortcomings of traditional teaching. In teaching, good teaching resources can be used to broaden students' horizons, deepen their cognition of things, and achieve certain functions and effects of improving teaching. The main purpose of the design and implementation of the distance education music platform is to make learners more It is a method that the modern education industry has not thought of to have good access to the learning content and use the advantages of the Internet to combine teaching, so that learners who love music will have a better advantage than before to learn. Therefore, making good use of teaching resources and teaching methods, and making good use of online and offline teaching, can give full play to the advantages of the teaching mode and realize the establishment of the platform.

1   Introduction

In the life of modern society, how to provide an online learning environment for educated students throughout the day, the combined online and offline teaching of the Internet can bring convenience to schools, and combined with the construction of the Internet and big data, teachers can better to organize students to use the network platform for information teaching, many teachers will set up public accounts and use the resources of the public accounts to teach. If they encounter learning problems that they do not understand in online and offline learning, they can use online classrooms at any time. The teacher asks questions. This kind of teaching mode solves the problems that students ask when they don't understand, teachers can solve problems for students in offline classrooms, and give students one-to-one teaching. From the perspective of classroom teaching efficiency, the quality of classroom teaching has been improved, and the teaching mode is based on the teacher-led position and combined with students' self-learning. In the information age of network development, it is necessary to have their own learning styles in online and offline distance music teaching on the Internet. Through different teaching modes to increase students' interest and feelings, improve students' comprehensive learning literacy and excellent academic performance, mainly It is to allow students to actively participate in learning.

Distance music education is explored through visual and auditory perspectives, disseminating music knowledge and feeling the profound meaning of music, which can improve the effect of teaching in a broader public vision. The implementation process of distance music education is carried out through a variety of music modes. The platform of various music education resources cooperates with music teaching, not limited by region and time, and can better solve the corresponding problems. The information age is mainly dominated by internet and cloud computing. The rapid development of these information networks has injected new soul into the establishment of distance music education platforms.

2   Construction and Basic Theory of Distance Music Education Platform

2.1   Construction of Distance Music Education Platform

The distance music education platform is a platform based on communication network technology and the Internet. It is based on computer network technology and can be composed of corresponding teaching systems and teaching resource libraries. At the same time, some online evaluation systems, teaching management systems and education management systems can also be constructed. Students can conduct corresponding management systems by posting questions in class, and learn music accordingly. Administrators can also manage the management system. It is also possible to perform fault management, safety management, and the like. The system of the distance music education platform proposed in this paper is shown in Fig. 1.
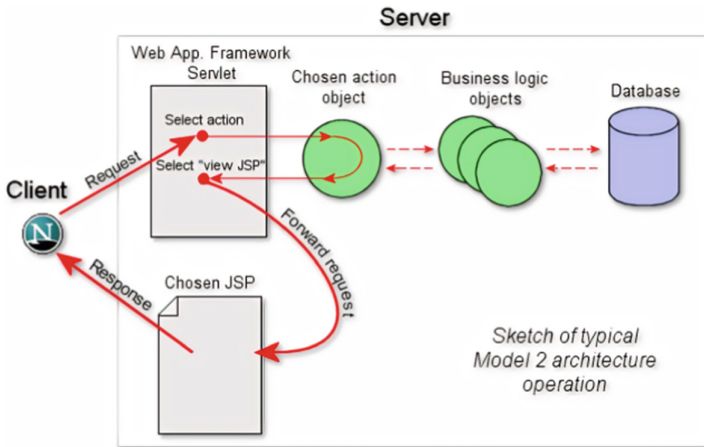
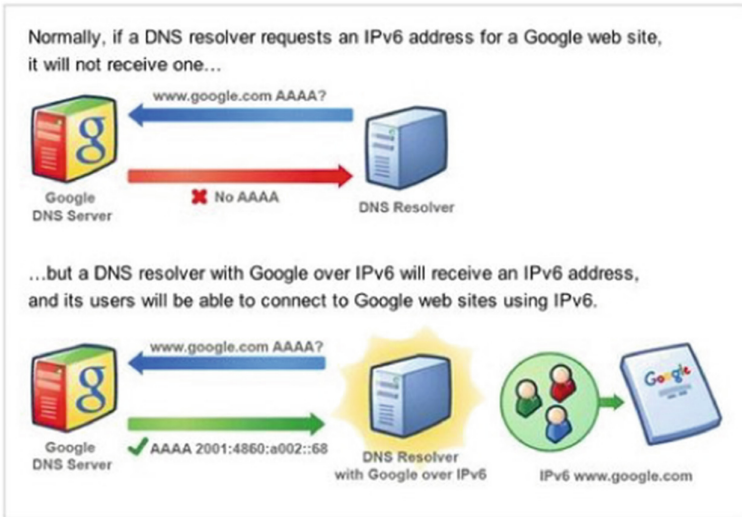**Fig. 1.** Schematic diagram of the structure of the distance music education platform

Fig. 2. Google App Engine technical flow chart

2.2   Internet-Based Distance Education Platform

Online and offline based on the Internet is a mode of expansion and use through the network. Its main core is to organize and manage the technology to be used in learning, thus forming a platform service provided by computer technology, which has the characteristics of openness and extension of distance teaching. Based on the online and offline distance music teaching and education platform of the Internet, it can give full play to the value of the Internet, make use of large information resources and powerful resource

capabilities. Designed with Google App Engine, to study the difficulty of distance music education structure, in order to provide service business system. See Fig. 2.

3   The Structure of Online and Offline Distance Music Education Platform Based on the Internet

The online and offline distance education platform based on the Internet is a platform established to serve students and teachers. Based on this, the structure of the platform is proposed, and a solid theory for the design and implementation of the platform is proposed.

3.1   Platform Structure

As a distributed and used architecture, SOA can provide corresponding music resources for music courses. The structure of the remote music construction platform mainly includes music course learners who can retrieve registered music courses; the music course registration center can operate by recording the database; the music course provider is the service of receiving courses and providing implementation Order. As shown in Fig. 3.

3.2   Features of the Structure

The platform structure can satisfy the SOA service specification in the system, realize the interaction between the release of the music course and the course, in addition, the teacher can help the teaching situation of the classroom, complete the combination of system functions, and then pass the course. Learning feelings and independence of learning. These features are all conducive to the optimization and deepening of music courses, and the sharing of music courses to the greatest extent.
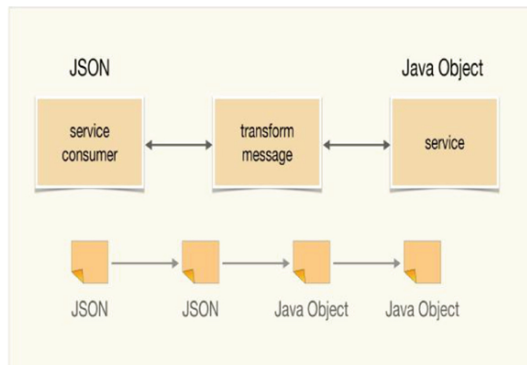

Fig. 3. Schematic diagram of SAO structure

4 Design of Online and Offline Distance Music Education Platform Based on Internet

There will be corresponding stages in the realization process of the online and offline distance music education platform structure based on the Internet. The stages are as follows:

4.1 Music Course Description

The first is that there is RDF to describe the course. Its meaning is a unified language of Web information, a knowledge representation composed of a semantic network structure, and a combination of subject, predicate and object to complete the description of information. As a standard for resource description proposed by the Internet, RDF can handle functions more flexibly, and can solve a series of description problems.

4.2 Release of Music Courses

Providers and learners of music courses need a unified direction to carry out corresponding services. Therefore, an Internet-based service registration center is required, which can describe some information about relevant courses, and use them to the greatest extent. Combined with course resources Bring yourself greater benefits.

4.3 Retrieval of Music Courses

The platform realizes the love of music for people through the retrieval process of music courses. The retrieval of music courses can be requested by querying the service registration, and you can get your own satisfaction from the course retrieval.

5 Realization of Online and Offline Distance Music Education Platform Based on Internet

In some of the platform structures mentioned above, an online and offline distance music education platform based on the Internet will also be developed. The platform is based on Web server, uses Visual Studio 2010 programming, and provides data storage services with database SQL Server. This is to realize functions such as the realization of music courses.

The platform system and the designed structure are shown in Fig. 4. The presentation layer mainly completes the learning interface function through the functions of the system; the business layer is to meet the different requirements of learners for learning and provide the browsing and sharing functions of music courses; the data layer can be implemented in the data of the system, regardless of the data. How to change, there will be backups in the data layer to manage this.
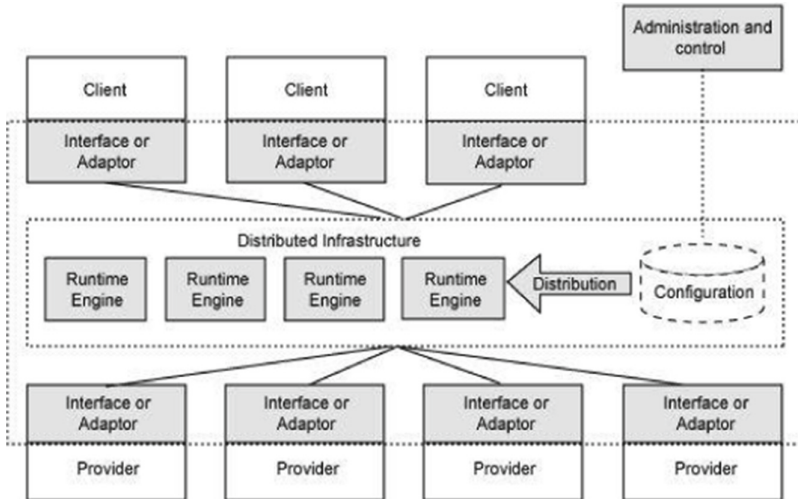
Fig. 4. Platform system and structure diagram of the design

6   Conclusion

This paper establishes an online and offline distance music education platform based on the Internet. It mainly analyzes the structure and design of the platform, and gives some examples of the processes that will appear in the platform. The system platform said that the distance music education combined with the Internet online and offline can realize the independence of music courses, promote the growth of related music education resources, and at the same time meet the demand for learning. Facing the new education model, it is to encourage students to study more vigorously and provide students with a better learning platform. All the purposes are related to students. With the development of my country's education industry, more and more people use online learning Using this new educational platform can enhance the love of learning and curiosity about new things. The next step of research needs to focus on solving the problems of platform reliability and data security. Making great use of the Internet online and offline music teaching can make breakthroughs in many services, so as to meet the needs of modern distance education. The use of Internet online and offline teaching can exercise students' potential abilities, replace the traditional education model, give full play to the advantages of the Internet, and ensure that teaching can be more orderly and efficient.

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