

Design and Research of Student Learning Exchange Education Platform based on Big Data

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Abstract

The education platform station is a comprehensive website dedicated to teaching, school publicity, textbook sharing and resource exchange. Schools and educational institutions in China and the world have their own websites. We plan to establish our own learning and exchange websites. On the website, it mainly displays and promotes Chinese and foreign cultures, publishes language learning materials, and organizes foreign language activities. Provide teachers with high-quality teaching resources; It provides a platform for students to learn independently and an interactive communication channel for the vast number of learning exchange enthusiasts.

Keywords

Big Data; Students; Learning Exchange; Platform.

1. Preface

The goal of education platform is to realize education informatization, and one of the goals of education informatization is to change the learning mode and teaching mode, so as to realize education modernization. At present, due to the development and application of the education system information platform, many education platform stations will be integrated into the overall education cloud platform. Taking the school education community as the existing education platform, campus network, and class network upgrade has become an inevitable choice for most schools. The application of this network technology mostly stays in the realization of resource collection, general communication and other functions. The practical exploration of how to effectively apply the network technology in classroom teaching, interactive display, and development refinement is still insufficient.

2. Features of New Education Platform Station

Compared with other traditional campus networks, the new education platform station has unique and distinctive characteristics, namely, strong interaction, comprehensiveness, coherence, application and creativity. The purpose of the construction of the learning exchange education platform station is to provide teachers and students with a new learning environment and learning methods, and provide a new way to expand their horizons. The function of teaching website should be able to serve teaching, learning, extracurricular practice, etc. It provides teachers and students with a kind of auxiliary tool outside the traditional classroom.

The existing learning exchange education information resources are limited, and some resources do not meet the requirements of the spirit of the new national curriculum standards. More of them stay at the level of materials, more stay at the level of demonstration courseware, and the sharing is weak. The ability to search for information, evaluate information, scientific information, interactive communication, and organize activities needs further development. Our learning exchange education platform station will search, provide, organize and release specific information or provide an interactive learning platform for specific people around

specific learning topics, teaching and research topics, and learning materials. It provides a teaching platform for college students who want to do part-time jobs and educational work, and educational courses for students who want to learn and exchange and foreigners who want to learn Chinese. We promote Chinese and foreign culture, publish language learning materials and provide language learning courses on the website, so that you can understand the outside world and soar in the language paradise without leaving home. The learning exchange education platform directly points to massive information resources, clear learning process and accurate learning content, effectively reducing the time waste that learners may cause due to blind surfing. It has become a new tool for exploring learning plans, interactive communication channels, e-textbooks (including online knowledge resources), and various kinds of intelligent resource teaching organizations.

For example, we classify and organize the teaching media such as text, pictures, animations, videos, and audio of courses according to certain teaching designs to form highly interactive online teaching resources, and provide them for good resource upload and download, resource retrieval, resource application, and other resources to achieve resource sharing and interaction. Similarly, we can make use of the flexible, vivid, lifelike and easy to control characteristics of network technology to show a large number of rich and colorful domestic and foreign cultures, landscapes, folk customs and other resources to users, so as to enhance the diversity and interest of learning and exchange. Through the convenience and interactivity of the network, a large number of interest classes, free education, extracurricular practice and other activities can be published and organized to strengthen cohesion and learning ability. As we all know, the website is a bridge to realize the distribution of educational resources. The network has a huge educational resource pool, which gathers the strength of the whole society and makes educational resources grow indefinitely. For developed and underdeveloped areas, every teacher and student will have equal opportunities to receive training and education, and will no longer be restricted by the school level, teaching materials and teachers' ability. It can not only greatly improve teaching efficiency, but also realize the social ideal of educational fairness. It enables teachers and students from all over the country to live in the same room, discuss and share together.

3. Functions of Learning Exchange Education Platform Station

In general, the learning exchange education platform station will have the following functions:

(1) Provide teachers and students with rich Chinese and foreign education and teaching materials, open up virtual classroom columns, and make the teaching design of each lesson into a teaching web page, including the operating steps and methods of practical exercises, so as to facilitate students' learning. It can provide online tests, online homework submission and correction, and realize interaction between teachers and students.

(2) The learning exchange education platform will have the processing function of website information. Teaching can dynamically increase teaching content, teaching courseware and video materials, which means that information and materials can be added, deleted and modified to facilitate the management of the website.

(3) It can provide the download and upload of relevant information, such as teaching materials, software, courseware, etc. of each class. Even when students return home, they can use the teaching website to carry out remote learning or review the courses they have learned. And some fresh content can be uploaded and shared at any time.

(4) It can provide information search function. Users can use the search method in the learning exchange education platform station according to their own needs, so that users can quickly find the information and content they need.

(5) There is a forum for communication and interaction. When teachers and students encounter difficulties in use or practice, they can put forward on the forum. When teachers answer students' questions, students can also exchange learning methods and share their learning experience with each other. It provides a platform for students and teachers to communicate online.

(6) Open activity organization column: release information about compulsory education, mutual aid exchange, interest groups, extracurricular practical activities, etc., and provide communication channels for various associations, organizations, and individuals. Increase opportunities for social practice and accelerate the pace of integration into society.

(7) Recruitment and employment columns: students can publish their own job information and exchange their own strengths, job hunting intentions and other contents in a targeted manner, so that students and employers have full opportunities to understand each other and reduce employment problems caused by ignorance. And verify and release the recruitment information of recruitment units, improve the social contact of students, and provide convenience for employment. The learning exchange education platform station can provide a new way of teaching interaction. The school website enables a new way of communication between teachers and teachers, teachers and students, students and students, students and society, so that everyone is no longer restricted by traditional education methods. The rich resources provided by our learning exchange education platform can enable students to find different education methods and get what they need. We allow different students to accept education and study at their own pace along their own path, so that they have more opportunities to enjoy the best educational opportunities, fully tap their internal potential, and cultivate their unique personality and personality.

4. Specific Implementation

With the rapid development of Internet technology, the society has begun to enter the "Internet+" era. Many aspects of people's production and life have undergone tremendous changes, and the traditional education methods have also been greatly challenged. The main change is that the role of online teaching in teaching is increasingly clear: online teaching can integrate superior resources, provide students with rich learning materials so that they can operate and explore conveniently without geographical restrictions. Moreover, through the setting of virtual scenes, students' interest in learning can be improved, their enthusiasm and initiative can be mobilized, and their creativity can be cultivated. Especially during the epidemic period, online teaching played a leading role in teaching. However, there are also some problems in online teaching. For example, in the process of online learning, because students are scattered in different places, teachers and students cannot communicate face to face in time, so there is a situation of poor learning results due to untimely communication. In view of this situation, and in order to better improve students' learning efficiency, we plan to develop a class learning exchange website. This is a platform website for sharing and exchanging teaching resources, which mainly realizes the following functions:

- 1) When students encounter difficulties in learning, they can post help on this website, and those who are capable of solving problems can reply to them.
- 2) Students in the class can upload various learning materials or learning software to the website for download by students in need.
- 3) The website has a class notice bar. All notices about schools, colleges and classes can be published in the notice bar for students to query.
- 4) The website has a special area for communication between teachers and students. Students can simply post their questions on the message board and wait for the teacher's answer. They

can also read the teacher's log to learn the latest knowledge, or log in the forum to communicate with teachers and students.

5) The website has a news section, which can release major news at home and abroad.

5. Design Content

This website provides an effective communication platform for teachers and students, and provides students with the latest learning materials. The operation shall be as simple and efficient as possible. The analysis system should provide the following functional operations for system participants: administrators can manage teaching resources, teacher information, class information and question bank information after logging in; teachers can manage homework, student scores and question bank information after logging in; students can view teaching resources. Check the homework assigned by the teacher, participate in the test, query the results and browse the messages.

To meet the above functional requirements, the system shall realize the following functions:

Registration: It provides the function of registering tourists as students.

Forum browsing: It provides the function for tourists to browse forum posts.

Login: provides the function of verifying user identity.

Personal information management: provides the function for administrators, teachers and students to modify personal information.

Teaching resources download: provides the function for students to download teaching resources.

Blog browsing: It provides the function for students and administrators to browse teachers' blogs.

Posting and replying on the forum: it provides the function of administrators, teachers and students to post and reply on the forum.

Upload of teaching resources: provides the function of teachers to upload teaching resources.

Teaching resource management: it provides the administrator with the function of managing teaching resources.

Teacher information management: provides the administrator with the function of managing teacher information.

Teacher blog management: provides the function for teachers and administrators to manage blog information.

Forum information management: provides the administrator with the function of managing forum information.

Student information management: it provides the administrator with the function of managing student information.

6. Conclusion

It is truly based on serving students and facilitating students, and solves problems in learning for students. The website has powerful functions, focusing on many scattered information closely related to students' learning, so that students can get a lot of useful information at a time on this website, without having to travel around, saving more time and energy. The powerful communication platform maximizes the use of educational resources, which is of practical significance.

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