

The Construction of a Smart English Teaching Platform Relying on Dynamic Learning Data Mining Algorithms

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Abstract

The dynamic learning platform is application-oriented, with the aid of the school's existing dynamic learning resources to satisfy teachers' lesson preparation, classroom teaching, student self-learning, network homework, etc. to achieve effective control of teaching, learning and examination. Platform, dynamic learning provides great convenience for the teaching and learning of teachers and students on the premise of providing network communication convenience. It is an advanced scientific and safe network technology. Because of this, the article combines the application of dynamic learning in English teaching to carry out the following detailed research. The continuous advancement of science and technology has made information technology widely used in all aspects of human life. The 21st century is an era of rapid development of network technology. The network has changed people's daily lives and the channels for acquiring knowledge. The Internet has also been widely used in major schools. In English teaching, with the help of the high efficiency, convenience and interactivity of modern Internet technology, actively constructing English teaching modules with rich content and strong interest can effectively break through teaching. The limitations of time and space allow students to independently use the content of the website and continuously improve the comprehensive abilities of learners in listening, speaking, reading, writing and translation, so that digital education can truly enter English teaching, truly serve the subject and serve students.

Keywords: *Dynamic Learning, Data Mining, Teaching Platform;*

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1. Introduction

The current "Internet+" learning platform has six characteristics, namely, multimedia, quasi-"teacher" (intelligent), immediacy, ubiquity, ecological circle and learner center. Multimedia performance provides a variety of media forms such as video, audio, animation, text, etc. and the content is rich in teaching resources provided by the learning platform. The essence of "teacher"ization is intelligence, which means that the learning platform displays the "words and deeds" of the "teacher" in

the process of interacting with students. For example, after students read the words, the learning platform will give a score and send out "perfect". "" and a "thumb" screen popped up. The quasi-"teacher"ization aims to make human-computer interaction more vivid and interesting and pursue the effect of teacher-student interaction in classroom teaching. Timeliness refers to the ability of the learning platform to judge students' exercises (objective questions) as soon as they are handed over and to give results. With the

popularization of 4G networks and smart phones, Internet access speeds have been greatly improved and mobile Internet access has become more rapid and the real-time advantages of learning platforms have continued to be highlighted. Ubiquity means learning can be done anytime and anywhere, which is conducive to learners to use fragmented time. Ubiquity and immediacy are twin brothers. These two characteristics are changing the time and space of traditional learning, that is, changing the traditional way of organizing teaching based on a fixed time and a fixed place. Hierarchicalization means that the learning platform takes a certain service or product as its core product and continuously derives new functions, services and products. For example, a certain English learning platform takes review composition as its core product and gradually provides translation services. The characteristic of circle layering is that the core products take the route of market segmentation and strive to be distinctive and innovative. The provision of non-core products or services is to meet the other learning needs of users, thereby increasing the viscosity of users. The learner-centered learning platform is of great significance, because to realize its commercial value, it must first be recognized and used by learners (users); secondly, learner-centered means that the learning platform must be based on the perspective of the learner. Consider a series of issues such as platform design, so that learners are comfortable and willing to learn^[1].

2. Dynamic learning platform

The dynamic learning resource website starts from demand analysis, to functional design, to database design and finally to code implementation. The function of the website is mainly divided into four functional modules: administrator backend, online lecturer backend, learner backend and site frontend. In general, the website is divided into two subsystems, namely the back-end management system and the front-end user system. Each of the subsystems can be further divided into details. The

back-end management system can be divided into three sections: the administrator back-end, the online lecturer back-end and the user back-end. The front-end user system can be divided into two sections, the guest section and the system section after the user logs in. The specific functions completed by the dynamic learning resource website include: administrators manage user information in the station, manage resources in the station, course types, etc.; online lecturers manage personal course information and manage course chapter information; learners study, watch videos and download videos on the site, View personal download records. The construction of the website used more popular industry technologies, including three-tier architecture ideas and powerful application servers. Of course, the system also has shortcomings. For example, the corresponding speed of the system is not taken into consideration. The cache can be added later and the verification of some pages is not very sufficient. Further improvements will be made in these aspects later. The education platform is in the figure below.

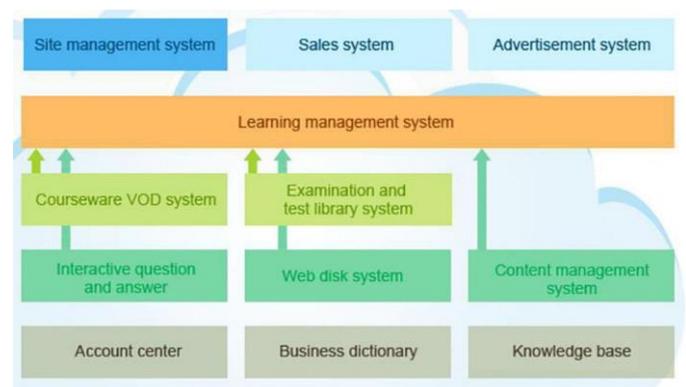


Figure1.Education platform.

3. Data mining technology

3.1. Data mining

Data mining technology was first proposed in the early 1990s. This technology is more oriented towards artificial intelligence research in the commercial field. In today's big data era, the application value of data mining technology is more obvious. In its actual application, data mining

technology can be used to effectively grasp the actual situation of the product itself. At the same time, it can also realize the optimization of data in a large amount of data information, so as to truly provide an important reference for enterprise development. In the current development and application of data mining technology, the previous method of finding information from simple and clear data has gradually changed to extracting valuable information from fuzzy and complex data. This in itself is a brand new technological breakthrough. The realization of this technological breakthrough requires more support such as Internet technology, information technology and cloud computing technology. The education platform management is in the figure below.

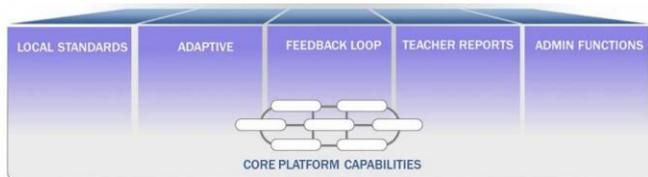


Figure 2. Education platform management.

3.2. Cluster analysis

Usually in the process of data mining, cluster analysis technology is one of the important data processing techniques. Through clustering analysis technology, it is possible to reorganize transactions that are difficult to understand effectively by themselves, prompt them to be presented in a more visualized state and divide them into different groups based on the different nature of the data. The whole is a kind of Effective data analysis process. Cluster analysis technology can classify relatively large data, thereby extracting required information resources. However, in actual application, this technology is significantly different from the traditional data classification processing method. Its own advantage is mainly that it can effectively group the information data of fuzzy objects. The current cluster analysis methods are mainly divided into hard clustering and fuzzy clustering. Among them,

the hard clustering method is more suitable for the data information, while the fuzzy clustering mainly realizes the classification effect by dividing the fuzzy data. On the whole, the two classification methods of cluster analysis have obvious differences, but the goals that can be achieved are basically the same and data classification can be achieved^[2]. The education cloud platform is in the figure below.

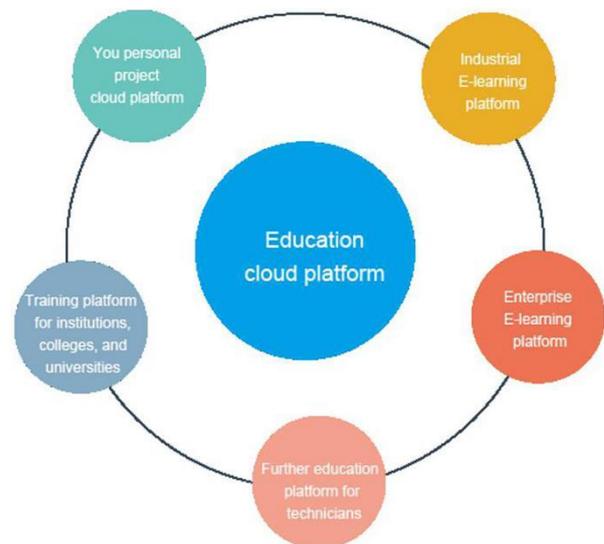


Figure 3. Education cloud platform.

4. Construction of Smart English Teaching Platform

As a subject that focuses on language output, English teaching requires students' autonomy and interaction. English learning cannot be separated from the support of educational information resources and small-class teaching requires more attention to individual needs and individual development. Therefore, making full use of the information-based teaching platform to optimize the development and application of teaching design can better serve teaching, improve classroom interest and student interaction and provide a wider space for oral practice for language learning. Since small class teaching, our school has realized the integration of campus network class communication and online use of multimedia teaching resources, music teaching and learning network learning space for

everyone, teaching tools, teaching resources, home-school education, online communication and fun learning. In the past five years, we have tried to develop online learning resources such as micro-teaching, homework App English learning client, flipped classroom, etc. and integrate them in English teaching^[3]. The education platform application is in the figure below.

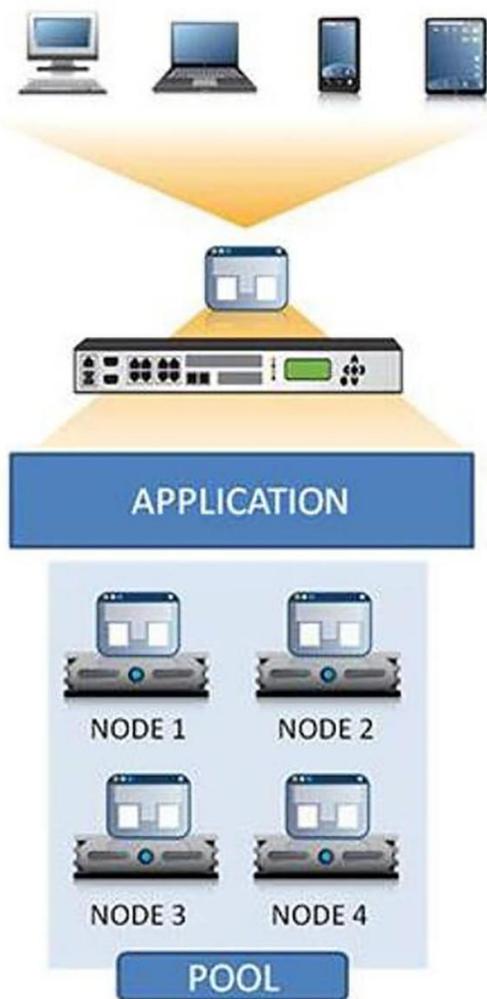


Figure4.Education platform application.

4.1. Development and application of micro-course resources

The micro lesson uses 5 to 10 minutes to explain a grammar point, homework problem or teaching experience in the form of a video. It uses concise language and rich pictures to attract students' attention and answers questions for students in a

short time. Teaching is well applied during and after class. The introduction of micro-videos stimulated students' interest and enthusiasm to participate in classroom learning. When explaining the difference between more/less/fewer, students are easily confused. We use a 3-minute micro-class video to explain the difference between the two and students can summarize themselves through independent observation and understanding, or group discussions. The application of micro-classes saves time, effort and efficiency, while providing students with a space for independent learning. In addition, teachers can also use micro-classes to consolidate exercises and expand knowledge, as well as provide feedback and comments on student work. The annual national primary and secondary school micro-class solicitation organized by the Education Information Management Center of the Ministry of Education has enabled micro-classes to cover the entire range from primary and secondary schools to universities and even kindergartens. Undoubtedly, the integration and application of micro-classes and English teaching has become the development requirement of the era of school education classroom teaching reform^[4]. The education platform resource is in the figure below.



Figure5.Education platform resource.

4.2. Flipped classroom

At present, flipped classroom has been effectively used in English teaching and has been promoted and implemented in primary and secondary schools in various places. Flipped classroom uses video and computer platform learning terminals, student-centered and realizes a complete learning process through pre-class preview, in-class learning and after-class review. It provides different teaching for different students and enables students to conduct personalized learning. Since the implementation of small class teaching in our school, in order to truly implement the "people-oriented", we have paid attention to each and developed each concept. According to the characteristics of English subjects, students watch the teacher's recorded micro-classes through the class QQ group network platform at home before class and then verify their mastery through a test. After submitting the test, the teacher will feedback the results to the students in time and the students will continue according to the feedback Blind spots in learning. On the second day, the teacher focused on the explanation based on the test results. However, this attempt still has many shortcomings due to the limitation of the network technology level and needs further improvement. In addition to the common micro-classes and flipped classrooms, advanced teaching methods such as "dynamic learning school", campus music teaching and learning client and other teaching clients are gradually being used in our school's English teaching. The development of rich and diverse teaching resources enables students to enjoy "anytime, anywhere, anytime" teaching services^[5]. The education platform is in the figure below.

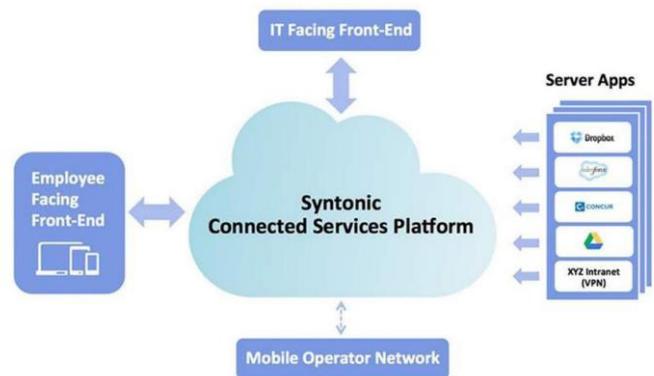


Figure 6. Education platform.

4.3. Innovative application of subject teaching platform

The use of the subject teaching platform of the management center provides an effective teaching tool for English teaching. It is developed for each school stage and subject and is developed for teachers' difficulty in explaining abstract knowledge, difficult to display micro-phenomena and difficulty in constructing personalized teaching content that are common in conventional teaching. It builds an efficient way for teachers to prepare lessons, teach lessons and organize student learning. Digital environment. Teachers dynamically combine teaching software as needed to help solve problems such as difficulties in making personalized teaching software. In addition, we also use Seewo software to make courseware and set up certain programs, design the English words and phrases in each class into a game mode, encourage students to learn words through the way, stimulate students' interest and mobilize the enthusiasm of English learning. Improve the efficiency of English learning^[6].

5. Conclusion

The dynamic learning platform is the product of the development of digitization and informatization. The college English teaching design based on the dynamic learning platform is very necessary to further promote education reform and is one of the important methods of digital teaching and mobile learning. The use of the dynamic learning platform

not only broadens the students' horizons, but also makes the connection between teachers and students closer, which helps build a learning atmosphere. Compared with previous teaching methods, the dynamic learning platform can stimulate the creativity and imagination of teachers and also help to understand the actual situation of students and give full play to the status of teachers in learning. Its application value needs further research and exploration.

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