Construction of Online English Learning Platform based on Micro-course

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Abstract

With the rapid development of mobile information technology, micro-learning has become an emerging learning method on campus. This paper aims at the group of higher vocational students, combined with their psychological characteristics and learning needs, to design and develop a high-level English micro-learning platform based on micro-courses, and can run normally on mainstream mobile terminals, providing for the implementation of mixed English teaching mode. Technical Support.

Keywords

Module design; Micro-class; English online learning platform.

1. Introduction

With the rapid development of network technology and the increasing intelligence of mobile phones, the way of learning for human beings is also undergoing fundamental changes. The importance of informal learning is increasingly prominent. Mobile micro-learning combines the advantages of e-learning, mobile learning, and fragmented learning, and will surely become the mainstream informal learning method. The Ministry of Education clearly stated in the "Development Plan for Education Informatization Ten Years (2011-2020)" "to comprehensively improve the informationization level of higher vocational colleges, and to build a digital environment that supports the scientific management and independent learning of teachers and students. Efforts will be made to promote the development and application of digital tools and learning platforms for students, and to improve students' self-directed learning and practical exploration skills."

2. Overall architecture and functional design

2.1 Background main function design

The background module of the high-level English micro-learning platform based on micro-courses is used by the administrator to manage the background of the whole system. The main functional modules involved are as follows: The user management module mainly classifies and manages two users, namely teachers and learners. The addition of new users and the modification of old user information. The resource management module mainly implements the uploading, modification and deletion of video resources, picture resources and text resources, and classifies and manages the learning resources according to the teaching needs, so that the students can browse and browse. The test management module mainly implements the functions of uploading, modifying, deleting, and automatic scoring and performance archiving of students after answering questions.

2.2 Main function design of the front desk

The design of the front desk is mainly to provide interactive operation for ordinary users. The main function modules are as follows: the new user clicks the registration button, fills in the personal information, and obtains the account number and password. The old user logs in directly and enters the resource learning interface. Students can choose the micro-courses they are interested in to learn online, comment on the video content, and read bilingual articles to learn about British and American

culture. After the resource learning is completed, students can complete the corresponding online test exercises to test their learning outcomes.

3. Design and implementation of functional modules

3.1 Design and implementation of the main interface of the front desk

The micro-course-based English micro-learning platform is mainly to provide a high-level students with an English learning environment anytime and anywhere. Therefore, the basic principles of the design of the platform client interface are simple and generous, well-defined, and illustrated, on the one hand giving the learner a relaxed and enjoyable experience, on the other hand, it is also convenient to click on the mobile terminal with a small screen. The main body of the page consists of four parts: wonderful micro-class, bilingual reading, cultural common sense, and online test. The middle of the slide is used as a recommendation for popular micro-courses. The bottom page of the home page includes shortcut menus such as home page, registration, login, and exit. The main interface renderings are as follows:

Figure 1 Foreground design renderings

3.2 Design and implementation of video playback module

The core part of the micro-course-based English micro-learning platform is the design and implementation of the video playback module, because the main way for learners to acquire knowledge is to use the mobile device to watch the micro-course video. To implement the video playback function, the learner accesses the platform homepage through the mobile browser, selects the video of interest, sends an on-demand instruction to the web server to apply for the video resource, and the web server searches the resource server for the corresponding video resource according to the user's request. The resources are then sent to the learner in the form of streaming media over the network.

Use ASP.NET background call ffmpeg program to achieve video transcoding, the main commands are as follows:

p.StartInfo.FileName=ffmpegtool;   // To call the external

Absolute path of the program ffmpeg

string strArg="-i"+sourceFile+"-vcodec libx264

-y"+playFile+" ";

p.StartInfo.Arguments=strArg;   //FFMPEG

Row parameter

The video file generated by ffmpeg transcoding is placed directly on the network and needs to be downloaded completely before it can be played. It cannot be broadcasted below. This is mainly because some moov metadata (such as video resolution, video length, etc.) is placed in the mp4 file by default. At the end, almost all players need this information support to build the media playback environment, so try to move this information to the head of the mp4 file, so that the player can read

the required information and successfully build the player. Environment, follow-up only needs to gradually get the playback dataJust fine.

4. Conclusion

With the further development of mobile communication technology and the substantial increase of wireless network bandwidth, mobile micro-learning will usher in a broader development space, and the demand for micro-learning resources and micro-learning platforms will become stronger and stronger, so the development of mobile The key technology of the micro-learning platform will be the focus of our study and study for a long time to come.

References

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