



The Design and Construction of Online Teaching Mode of Chinese Language and Literature Under the Background of Internet + Education

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Abstract. In view of the problems in the current teaching of Chinese language and literature, such as lagging teaching resources, single teaching mode, and students' low interest in learning, etc. In this paper, based on the idea of digital education, the traditional teaching mode of Chinese language and literature is reformed, and a brand-new online teaching mode of Chinese language and literature is designed by constructing a comprehensive application platform system of digital education of Chinese language and literature in colleges and universities. In this system, the front end is developed in the mode of separation of front end and back end. The front end is developed in HTML + CSS + JavaScript language and VUE.JS framework, and the back end is developed in PHP language combined with yii framework and B/S mode combined with ajax asynchronous information transmission technology. On the surface, this system helps teachers realize online teaching by video, meets the needs of students to learn diverse and excellent teaching resources, and effectively promotes students' interest in learning Chinese language and literature.

Keywords: PHP · Digital education · Chinese language and literature · Application platform construction

1 Introduction

With the rapid development of Internet information technology, the concept of digitalization has gradually penetrated into all walks of life. The application in the digital teaching and education industry has gradually gained popularity. However, at present, there are some problems in the teaching mode of Chinese language and literature in colleges and universities. The traditional indoor classroom teaching mode is still used in many colleges and universities. According to the fixed teaching materials, teachers teach students uniformly and indiscriminately. This teaching method is monotonous and boring, which leads to students' low interest in learning Chinese language and literature. The teacher-led teaching method has seriously hampered the innovative thinking that college students majoring in Chinese language and literature should have. In the

ever-changing information age, the fixed book mode of teaching materials also leads to the lag of educational resources. [1].

According to the above analysis of the problems in current Chinese language and literature education, the author of this paper thinks that we should combine the idea of digital education to develop a comprehensive application platform system of Chinese language and literature digital education in colleges and universities based on PHP. The system helps teachers to design and upload online courses, cite high-quality extracurricular teaching resources, and actively carry out online Chinese language and literature teaching activities based on online learning platform. Help students achieve efficient and fast online learning anytime, anywhere. In this paper, the existing traditional education strategy of Chinese language and literature major is changed, and the digital education idea is combined to further promote the education reform process.

2 Key Technologies

2.1 Web Technology

The full name of Web is World Wide Web, which is the most widely used mode of information publishing and internet information browsing. Its object is not only web pages, but also programs. Actually, web technology is a collection, a collection of servers built on the Internet and a collection of various management objects. The access process of the Web system can be basically summarized into four steps. First, the browser initiates the access, then DNS resolves the domain name information and forwards it to the computer where the server is located. Finally, after the server finishes processing, it returns to the client to complete the system processing. The Web technology can be divided into two categories: static website and dynamic website [2].

2.2 PHP Development Language

The PHP is a common dynamic web development language mentioned above. It is a scripting language developed on the server side, which can be used to develop HTML. As with many development languages, PHP is also an object-oriented scripting language. Besides, it has the characteristics of portability and independent architecture. Compared with similar C and JAVA languages, it is simpler and easier to learn. The HTML embedding for primary web page development is very practical. It is a common open source language used by developers to develop dynamic websites.

2.3 Yii Development Framework

YII is a professional framework tool that uses PHP language to develop large-scale web applications. Because it is based on component applications, it is simple, efficient, reusable and extensible compared with other frameworks.

2.4 Development Environment

The development system of the comprehensive application system of Chinese language and literature digital education in colleges and universities based on PHP language chooses Windows version 10.0, and the basic development environment is divided into front-end and back-end. On the front end, vue.js framework is selected, and HTML + CSS + JavaScript language is used for development. On the back-end aspect, the development environment is nginx + apache + IIS6.0 to build the server, the development language of the server is PHP, the development framework is yii, and the relational database is MySQL 8.0.28. [3].

3 Overall Design

This system is developed with the mode of separating front and back ends, and the front-end framework adopts VUE, which is responsible for the view layer in MVC. Yii is responsible for the control layer and template layer of MVC pattern. The premise of this mode is to modify the default configuration so that the path of vue's build project is no longer placed under dist but in yii's web directory. In addition, creating a new action is the key to realize front-end separation. The specific method is to create a new webapp action in BuserController in trunk/bapp/controllers/ of yii's back-end controller, or you can choose to add it in cusercontroller in capp. In this process, the most critical code is "YII:: \$ app-> params ['burr']", and the url in the code is the specific address of the vue project.

The display layer is rendered by browser and interacted with ajax technology. The functional subsystems of business layer design include personal center, question bank management, learning resources, etc. The data layer is responsible for the connection between the system and the database, including data backup, database reading and writing, information storage, etc. [4].

4 Function Realization

4.1 Student Side

After the student's account is uniformly registered by the school, the student user can log in for the first time using the student ID and default password. After that, you can click the Personal Center to change your password to complete the activation of your account. To realize the landing page, the key points are actionLogin method in sitecontroller.php in yii controller and rules () method in LoginForm.php. The Rules () can verify the data items of the specified student account, and it is also necessary to combine the login () method to realize the persistent storage of the student user's login information. In this way, student users can log in without repeatedly entering passwords within one month. [5].

The user can click on the online classroom content to obtain the teaching plan content assigned by the teacher in the current semester. Classroom contents of Chinese language teaching recorded by teachers. After students finish their homework, click on

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Gateway::bindUid($client_id, $uid);
Gateway::joinGroup($client_id, $group_id): $pushMsg= array();
$pushMsg['type']='push';
$pushMsg['data']=$this->_getCacheGroupMsg($game_id, $server_id, $uname, $group_id,
$this->_msgCd);
Gateway::sendToClient($client_id, json_encode($pushMsg));

```

Fig. 1. Implementation code of background push function

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public function actionBatchDelete(){
if(isset($_POST['ids'])){
Sids= $_POST['ids'];
foreach(Sids as $id){
$model=$this->loadModel($id);
$model->delete();
}
if(!Yii::app()->request->getIsAjaxRequest()){
$this->redirect(isset($_POST['returnUrl'])?$_POST['returnUrl']:
array(index));
} else{
echo JSON::encode(array('status'=>0));
Yii::app()->end();}}

```

Fig. 2. Code of article management implementation

homework management and submit them in chronological order. The user can also click the homework record to view the homework evaluation content made by the teacher in the submitted homework. The file upload type of job supports two types of office files and compressed files. Choose_type.php is combined with the \$key parameter to realize the function of selecting the content type of uploaded files.

With the online chat function, students can discuss with teachers about the difficulties encountered in the process of learning Chinese language and literature in class and after class. The online chat function is realized by ajax asynchronous sending function. When the user fills in the contents in the dialog box with the teacher and clicks the send button. The system executes the request through ajax, and transmits the content information data to the back-end server, which then pushes the information data to the teacher's port. While the teacher client completes the acquisition and presentation of back-end message content data through ws.onmessage component. The user code for pushing information to teachers in the background is shown in Fig. 1.

4.2 Teacher's Side

Besides all the functions of the student side, each functional module of the teacher side also has the function of operation and management of adding, deleting and checking all learning resources in the online classroom and extracurricular learning of the student side. The teacher's function of deleting various resources is realized through the array of ID numbers of each document. After clicking Delete, the system will upload the updated circular array of ID, and then the deletion can be completed. All kinds of article management functions are realized by the article controller articlecontroller.php. The teacher can delete, change the order, publish new articles and so on. The implementation code is shown in Fig. 2.

5 Conclusion

In this paper, the comprehensive application system of Chinese language and literature digital education in colleges and universities basically realizes the basic functions of the teaching platform, but due to the limited personal ability, insufficient development environment and research time, there are still many places in this system to be further strengthened and improved. There is a lack of relevant settings of system administrator's rights, which makes the security performance of the system insufficient. In the future use and promotion process, it is necessary to further improve the realization of functions as much as possible, and at the same time make the system run smoothly and steadily.

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