



Design and Implementation of Online Teaching System of Chinese Ancient History Based on Web Technology

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Abstract. The online teaching system of Chinese ancient history is designed and implemented based on Web technology, with PHP as the development language, ThinkPHP as the server-side development framework and WAMP as the development environment. Aiming at the new requirements of the current system construction of ancient Chinese historiography and the new orientation of talent training objectives in the new era, and with the help of the application advantages of network information technology, the system will put forward a set of practical and comprehensive application solutions, focusing on the innovation of teaching forms, the improvement of teaching resources, the cultivation of professional ability and the guidance of thinking value.

Keywords: Web technology · PHP · ThinkPHP · Ancient Chinese history · Online teaching system

1 Introduction

In the current setting of history education and teaching system in colleges and universities, ancient Chinese history has a rigorous and distinctive teaching paradigm, unique talent training objectives and specific implementation plans. The profound academic background, clear research objects and clear professional boundaries directly reflect the independence, seriousness and scientificity of the ancient Chinese historiography. [2] In the meantime, it is destined to make its discipline system relatively closed, showing some problems, such as backward teaching concepts, repeated teaching contents, single teaching forms, emphasizing theory over practice, etc. For the information and digital construction of modern education, the degree of acceptance is not high, and the traditional teaching mode can no longer meet the new requirements of the current “new liberal arts” system construction and the new standards of talent training objectives in the new era.

In view of this, this paper holds that, based on Web technology, using PHP as the development language, ThinkPHP as the server-side development framework, the online teaching system of ancient Chinese history is completed, and a comprehensive application solution is put forward from the aspects of professional connotation, academic

accomplishment, comprehensive ability construction and personalized development. The research environment and teaching atmosphere of ancient Chinese history have been effectively improved, the innovation of teaching mode has been realized, the improvement of discipline system has been promoted, and the process of informatization and digitalization of higher education has been further promoted, which has made positive contributions to the cultivation of comprehensive applied talents of history major in the new period.

2 Introduction of Related Technical Theories

2.1 Web Technology

The world wide Web, also known as the World Wide Web, is a global, dynamic, interactive and cross-platform distributed graphic information system based on HTML and HTTP, which is established on the Internet and provides data information services to users. [1] All technologies on which Web design, development and function realization depend are collectively referred to as Web technologies, generally including client-side technologies and server-side technologies, which correspond to the client-side and server-side under the distributed application structure of Web.

2.2 PHP

PHP is a scripting language that can run directly with the server. It is not only suitable for the development of various Web applications, but also can be directly embedded in HTML to complete the application, which greatly improves the execution efficiency of the language.

During the actual Web application development process, PHP language takes up less system resources than other languages, and its running process is limited to its own memory space. The overall execution process will go through four stages: scanning, parsing, compiling and executing. [2].

2.3 ThinkPHP

ThinkPHP was released in 2006, which is a fast, compatible and simple lightweight domestic PHP development framework. It aims to optimize and improve the overall usability and scalability of the system through simple code and excellent performance. [3] The ThinkPHP is born out of the Struts structure of Java, and draws lessons from many excellent Web development frameworks and design patterns. It can adapt to the object-oriented system development structure and MVC pattern well. It can simplify the construction process of enterprise-level applications as a whole, and realize the agile development of Web applications.

```
class EmployeeModel
{
    protected $link;
    public function __construct()
    {
        $this->link = new mysqli('127.0.0.1', 'root', '123456', 'tp');
        $this->link->set_charset('utf8');
    }
    public function getAll()
    {
        $sql = "SELECT * FROM employees";
        $res = $this->link->query($sql);
        return $res->fetch_all(MYSQLI_ASSOC);
    }
}
```

Fig. 1. Key code for creating model Model.php

2.4 Development Process

According to the above application requirements, complete the configuration and deployment of the development environment of the online teaching system of ancient Chinese history. The overall development environment of the system is WAMP, namely Windows + Apache + MySQL + PHP mode. For this reason, the operating system is Windows 10.0 x86-64bit, the basic development environment is PHP, the version is 8.1.9 and the integrated development tool is PHPStorm 2020.1. The Web server is Apache 2.4 and the database is MySQL 5.7. The version of ThinkPHP is 5.0. With the help of Composer management tool, the installation path of php.exe is automatically obtained, and ThinkPHP is installed in the specified directory.

In PHPStorm, find the target path of ThinkPHP through the “Open” option under the “File” menu, and complete the import of all files of ThinkPHP. According to the application characteristics and system requirements of ThinkPHP framework, virtual machine configuration, MVC creation and single entry file configuration will be completed. [4] As shown in Fig. 1, it is the key code for creating the model. By defining the `__construct()` method, the path, account and password of MySQL data are connected correspondingly, so as to obtain all the data in the database.

Through the introduction of the above key technical theories, the overall environment of the system development, the configuration of related software and tools are determined, and the technical feasibility of the online teaching system of ancient Chinese history is also clarified.

3 Function Realization

3.1 Student Side

a. Online teaching

In this functional module, the system will provide two parts of teaching resources: moral cultivation, top-quality core courses and extracurricular development. In the part of moral cultivation, the ideological and political content of the course will be integrated into the course of ancient Chinese history. By combing and digging the teaching content in detail, the philosophical thought, humanistic spirit, humanistic spirit, moral concept and enlightenment thought rich in Chinese excellent traditional culture will be fully penetrated into it and displayed in the form of propositions or projects. [5] This method is realizing the organic unity of ideological and political guidance and knowledge transfer, effectively improving students' moral cultivation, and achieving the educational goal of "cultivating people by virtue".

As for the extra-curricular expansion, the system will concentrate on classifying and storing the expanded extra-curricular teaching resources, so that students can use their fragmented time to study. A large number of expanding resources can not only be an effective supplement to classroom teaching, but also broaden students' horizons and knowledge and greatly stimulate students' autonomy in learning.

b. Innovative practices

With this function module, according to the requirements of historical materials teaching in different stages, we design and issue targeted practical projects, and publish them in the system in time, so that students can choose to join them and complete the project practice in the form of a team. The system can support student users to upload report documents and automatically synchronize them to the teacher's side. This function depends on the `getDocx.class.php ()` method under PHP. The key code is shown in Fig. 2. The user can upload the report file by himself through the plug-in in the page by defining the file upload address, specified format and file size. [6].

c. Academic research

In this functional module, students and users can see the current trends of ancient Chinese history in the academic frontier and the future development trend of ancient Chinese history under the background of the construction of "new liberal arts" and the construction of high-quality education system.

3.2 Teacher Side

When the teacher users log in to the system, the main work lies in the collection, collation, production, uploading and maintenance of various teaching resources. As for students' communication and questioning, they can also actively participate in it. With the application advantages of the platform, targeted counseling and help to students can be completed more conveniently and directly, and the teaching effect can be improved.

```

<?php
include "getDocx.class.php";
include ("../include/config.php");
$filename = $_FILES['file']['name'];
$tmp_name = $_FILES['file']['tmp_name'];
$size = $_FILES['file']['size'];
$error = $_FILES['file']['error'];
if ($size > 100*1024*1024){
    jsoncode(0,"");
    echo "<script>alert('≤2M');window.history.go(-1);</script>";
    exit();
}
$arr = pathinfo($filename);
$ext_suffix = $arr['extension'];
$allow_suffix = array('word','docx');
if (in_array($ext_suffix, $allow_suffix)){
    jsoncode(0,'Only word.docx');
    echo "<script>alert('Only word.docx');window.history.go(-1);</script>";
    exit();
}
if (!file_exists('uploads')){
    mkdir('uploads');
}
$new_filename = date('YmdHis',time()).rand(100,1000).'.'.$ext_suffix;
$new_filename = 'uploads/'.$new_filename;

```

Fig. 2. Users upload the key code of document function by themselves through the interface.

4 Conclusion

In this paper, taking the present situation of Chinese ancient history teaching in colleges and universities as the research object, aiming at the new requirements of the current high-quality discipline system construction and the new orientation of the training goal of comprehensive professional historians in the new period, and with the help of the application advantages of network information technology, a comprehensive application solution is put forward. In the follow-up research, we will continue to expand the applicability and practicability of the system, integrate more information technology into the education and teaching practice of ancient Chinese history, and make contributions to the cultivation of historians.

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