



Construction of Ideological and Political Network Learning System for College English Courses Based on PHP Language

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Abstract. College English is one of the basic public courses that every college student must take. It has a large proportion of class hours and a long course. It is aimed at all students in the school. Colleges and universities add the form of ideological and political courses to this high proportion of public courses. It is very important to seek a feasible path for the ideological and political reform of other courses through the ideological and political reform of college English courses. However, the current implementation of the ideological and political system in college English courses is not ideal. There are generally unclear teaching objectives, teachers' ideological and political literacy needs to be improved, few ideological and political related content in English textbooks, and ideological and political elements in the teaching evaluation system are ignored. This paper aims to improve the current ideological and political problems in college English courses by developing a PHP-based ideological and political platform for college English courses under B/S, and to provide teachers and students with a network platform to improve English ideological and political knowledge, aiming to promote college English courses. The construction of ideological and political work plays a good leading role in curriculum ideological and political work, so as to achieve the long-term goal of morality and education in colleges and universities.

Keywords: PHP language · college English · course ideology and politics · network platform

1 Introduction

In recent years, my country has introduced many policies to improve the ideological and political awareness and literacy of college students, aiming to cultivate a group of high-quality talents with both political integrity and ability for the motherland. Therefore, the ideological and political construction of courses has become the key teaching goals and tasks to be achieved by colleges and universities at this stage. In this way, international and compound young talents with both political integrity and ability are cultivated for the country. If you want to implement this reform, you must find a suitable carrier, and language courses are very suitable for adding ideological and political elements to reform [3]. Language is not only the cultural embodiment of a country, but also an

important carrier of cultural heritage. Language and culture are interdependent. Any language contains profound ideological connotation and cultural heritage, as well as intrinsic value and spiritual and moral factors related to it. English, as a language that combines two attributes of instrumentality and culture, will affect students' ideological and political judgment ability and consciousness in the process of in-depth study, and may even have problems such as admiration for foreigners, deviation of their own values, and cultural insecurity.. This requires the integration of ideological and political thoughts and elements into the curriculum, timely reversal of the teaching situation, correction of students' thinking, so that students can correctly understand the meaning of learning in learning, so that they can grow into high-quality youth with ideals, pursuits and beliefs [4].

As one of the important public courses in various colleges and universities, college English courses run through almost every student's college career. Using college English courses as a carrier to implement reform and practice on the ideological and political construction of courses, it is very important to promote the ideological and political construction of public subject courses. And development can play an extremely important role in promoting. Colleges and universities need to carry out the ideological and political construction of college English courses on the basis of adhering to the basic principles of purpose and regularity, not only to improve the development level of ideological and political courses, but also to try their best to meet the needs of students' learning, and to find and explore from multiple perspectives. The ideas and methods of ideological and political construction of college English courses ensure the reasonable development of ideological and political construction of college English courses [7]. However, the ideological and political work of college English courses is not smooth. On the one hand, the objectives and methods of English teaching are not clear enough, and there are too few ideological elements covered in English education. On the other hand, the teachers do not incorporate ideological and political elements in the final scoring mechanism. The author believes that the ideological and political learning platform for college English courses based on PHP language designed in this paper provides a stable platform for teachers and students to improve their learning and communicate and interact. Teachers can learn new teaching methods through the platform and combine what they have learned to write teaching content that is not covered in books for students. They can also arrange some virtual practice tasks for students based on the content taught in class combined with ideological and political elements. As an auxiliary teaching platform for offline teaching, a new grading mechanism has been established for students, which integrates group activities, virtual practice tasks, and message board points. It is no longer limited to classroom performance and final grades to grade students' learning. In the evaluation system, students can choose groups to study according to their own interests, and can also exchange experiences and ask questions through the message board, which can effectively enhance students' enthusiasm for learning. It can effectively improve the current difficulties faced by the ideological and political construction of English courses, and provide new methods for the ideological and political reform of college English courses.

2 Technical Overview

2.1 Front-End Technology

The development of Web sites and systems is inseparable from the support of front-end technology. The front-end refers to the client. When we open the browser, the pages, text, navigation, and pictures that we can see are all presented by the front-end technology. At present, the web pages in the browser follow the W3C standard, and the core technologies of front-end development include the three giants, namely HTML, CSS and JavaScript. They have a clear division of labor and cooperate with each other. Briefly summarize their functions: HTML is responsible for writing the content required by the web page, CSS sets the size and appearance of the web page, etc., and JavaScript renders dynamic effects for the web page. Combined with the application, you can develop a dynamic and beautiful website.

2.2 Backend Technology

2.2.1 PHP Language

The PHP language is currently the mainstream server-side development language. The PHP language is relatively easy to master, so it is favored by many back-end developers. The version of PHP has been updated very quickly, and it has been upgraded to PHP7.4. Compared with the previous version, it has some new features, such as: improving the weak type of PHP, using annotations to declare class attributes [1], and adding new type attributes, etc. As shown in Fig. 1, some of the features of the previous version and version 7.4 have changed: function writing has been simplified. This function is called an arrow function and its expression is a short closure. This change can access the parent scope without calling the use keyword. PHP is powerful, it can not only be written independently, but also embedded in HTML text, which is convenient for developers to write code. The application scope of the PHP language is also very wide, including: the development of web sites, writing data collection (crawlers), assisting in the development of other technologies, and developing practical frameworks. The PHP language is used for the development of the system in this article because it can perfectly interact with the MySQL language to complete the development of the server side of this article.

2.2.2 Yii Framework

There are many practical frameworks included in PHP development, such as: ThinkPHP, Yii, CI, Laravel, Phalcon, etc. The difference between Yii framework and other frameworks is that it is a pure object-oriented programming framework. It has a very strong inversion control function, and can realize the dependencies between controls and objects through a set of flexible, general and configurable mechanisms, and complete isolation [10]. YII has the same framework idea as MVC, it is a heavyweight framework compared to other PHP frameworks. The Yii framework can automatically generate a directory structure based on the capabilities of its scaffolding. This article chooses yii

```

Previous version of writing.
$factor = 10;
$numns = array_map(fn($n) => $n * $factor, [1, 2, 3, 4]);
// $numns = array(10, 20, 30, 40);
Writing of version 7.4
$factor = 10;
$numns = array_map(function ($num) use ($factor){
    return $num * $factor;
}, [1, 2, 3, 4]);

```

Fig. 1. Function writing changes

```

class Useridentity extends CUseridentity
{
    public function authenticate()
    {
        $users=array(
            // username => password
            'demo'=>'demo',
            'admin'=>'admin',
        );
        if(!isset($users[$this->username]))
            $this->errorCode=self::ERROR_USERNAME_INVALID;
        else if($users[$this->username]!=$this->password)
            $this->errorCode=self::ERROR_PASSWORD_INVALID;
        else
            $this->errorCode=self::ERROR_NONE;
        return !$this->errorCode;
    }
}

```

Fig. 2. Validation function code

as the development framework of the system server based on its extremely high scalability and security, which can be customized according to its own needs. The method's CSRF token is automatically checked. Figure 2 shows the verification function of the UserIdentity class file. After the user enters the account password on the page, the user login verification is realized by calling this function [8].

2.2.3 MySQL Database

The database cannot exist independently and needs to be edited in the application software. MySQL is one of the best RDBMS application software in WEB application development. It can save different data in different data tables, just like supermarket shelves. There are classifications, numbers and levels. It provides APIs for a variety of mainstream development programming languages including C, C++, Python, Java, Perl, PHP, etc. [9], because of this, it supports the connection of multiple databases and provides a way for them. It can run, process, and operate databases with thousands of pieces of data. Among the supported languages, MySQL has the best relationship with

```
create table TbStudent
(
  stuid integer not null,
  stuname varchar(20) not null,
  stusex bit default 1,
  stubirth datetime not null,
  stutel char(11),
  stuaddr varchar(255),
  stuphoto longblob,
  primary key (stuid)
);
```

Fig. 3. MySQL create data table code

PHP. They cooperate with each other like old friends and partners who have worked together for many years. This article selects it as the system's database support is also because of this. As shown in Fig. 3 is the code to create the student table with MySQL.

There should be a spacing before of 24-point.

2.3 Apache Server

Apache is a web server written in C language and based on modular design. Generally speaking, the readability of the code is higher than that of php code. It does not have much core code, and most of the functions are allocated to each module, each module is loaded on demand at system startup. Apache supports many features, mostly through compiled modules. These features range from server-side programming language support to authentication schemes. Some common language interfaces support Perl, Python, Tcl, and PHP. "mod_access", "mod_auth", and "mod_digest" are all popular authentication modules. The 2.x core of Apache builds on previous versions, adding new Apache interfaces and IPv6 support. The role of the Apache server mainly includes: parsing multiple web page languages including PHP and receiving and responding to web user requests.

2.4 Development Environment

According to the above key technologies, the development environment of this college English ideological and political learning platform is deployed. The development environment of this system involving technologies is installed under the Windows system. Next, the front-end technology, back-end technology, server and database related Software and plug-ins are installed and configured. First configure the front-end development environment: Go to the official website of node.js and download the node-v16.15.0-x64 version. After installation, there is no need to manually configure the environment variables, it will be configured automatically; install grunt, and in the menu node. Open the node.js command in the js path, enter the npm install -g grunt cli command, and grunt will be automatically obtained and installed; the plugins used in the installation,

install bower, express and supervisor respectively, and finally add configuration and initialization.

Then deploy the server and back-end development environment: download and install the Apache server and add its installation path and system variable “%CATALINA_HOME%\bin” to the environment variable, find the httpd.conf file in the conf directory and modify it so that it supports parsing PHP file, then modify the Apache site directory, and finally set up all functions and configurations that support PHP; download and install the php-5.4.29-Win32-VC9-x86 version of PHP, download the yii framework and extract it to the apache server. In the htdoc folder of the php.ini file, find the “extension=php_pdo_mssql.dll”, “extension=php_mysql.dll”, “extension=php_pdo_mysql.dll” three commands in the php.ini file to remove the semicolon, and then add “D:\myenv\php” environment variable, add database expansion information to this file.

Finally, install and configure the MySQL database: download and install the mysql-8.0.29-winx64 version, configure environment variables for it after installation, and add MySQL services. The deployment of the above environment guarantees the development feasibility of the college English ideological and political learning platform, and provides a reliable environment support for system development.

3 Demand Analysis

3.1 System Requirements Analysis

The development of ideological and political work in college English courses currently has many limitations and problems that need to be solved urgently. The existing teaching model not only has a single form, but also has a low degree of integration between content and ideological and political work, and teachers who teach college English courses do not have specific and effective methods to integrate ideological and political work. The integration of politics and English teaching has been unable to support the needs of ideological and political reform of English courses. After analyzing and researching the actual problems in the ideological and political work of college English courses in colleges and universities, this paper develops an ideological and political learning platform for college English courses based on PHP technology to meet the needs of different roles from different perspectives. Teachers can improve their ideological and political literacy and teaching ability through learning on the platform, and combine what they have learned to improve students’ grades and learning interests: learn the method of combining ideological and political and English in the course, and combine the course ideological and political with English according to what they have learned. The teaching content is combined to summarize the teaching plan and electronic materials for students to download, watch and learn; you can interact with students through the platform’s message board, not only to view the students’ experience and share, but also to answer questions for students; The content of the explanation is combined with ideological and political elements to arrange virtual practice tasks, to understand the students’ mastery of knowledge, and to give corresponding scores; at the end of the semester, teachers can give comprehensive evaluations based on the students’ scores on the platform and the results of classroom and final exams.

Students can consolidate knowledge, learn new knowledge, and exchange experiences on the platform: they can choose their favorite interest groups to study; they can accumulate scores by completing activities; they can read English ideological and political textbooks written by teachers to improve their English scores and ideological and political awareness; they can Share your learning experience on the message board and ask your teacher to answer your questions; you can accumulate your usual grades by completing the virtual tasks posted by the teacher.

3.2 Overall Design

The college English ideological and political learning platform in this article is designed and developed under the B/S architecture. HTML, CSS and JavaScript are used to display the front-end pages of the learning system. HTML is responsible for displaying the content, and CSS is used for the modification of content and modules. JavaScript is responsible for implementing the dynamic interaction of the system [5]. The server side uses the PHP language combined with the yii framework. The yii framework is developed in accordance with the MVC design pattern, which is very suitable for the development of this learning system. The MySQL database is used to realize the data interaction with the server, and store the data generated by teachers and students through the operation of the client page, such as: the courseware edited and uploaded by the teacher, the homework submitted by the students, etc. The operations performed by teachers and students using the client are all completed through the web server Apache to send requests to the server and MySQL database to invoke relevant commands and data. The operation process of teachers and students in the college English ideological and political learning platform is as follows: teachers and students make specific operations on the client to send operation requests to the browser, the browser sends the corresponding request to the Apache server, and the server sends it to the server. After receiving, the server responds to the request and submits an application to the database. As shown in Fig. 4, PHP traverses the data in

```

<?php
header('Content-type:text/html;charset=utf-8');
//connection authentication
$link = mysqli_connect('localhost:3306','root','123456') or die('Connection failed');
//set character set
mysqli_query($link,'set names utf8');
//select database
mysqli_query($link,'use myblog');
//Fetch data from data table
$sql = "select id,picturename,picturetime from pictures";
//Execute the sql command and assign the value to $rs
$rs = mysqli_query($link,$sql);
$pic = array();
//Iterate over $rs
while($row = mysqli_fetch_assoc($rs)){
    //traverse the result to $pic
    $pic[] = $row;
}
//print_r('<pre>');
//print_r($pic);
?>

```

Fig. 4. Traversal code

the MySQL database. The database calls out the relevant information data and forwards it to the server side, the server side receives the data and returns the result to the user side, and displays it to the user in the form of HTML.

4 Function Realization

As shown in Fig. 5, the specific functional modules of the college English ideological and political learning platform are designed based on the analysis of the ideological and political status quo of college English courses and the different needs of teachers and students. According to the needs, the system is divided into students and teachers. Enter the account password to verify and enter the corresponding function module.

The student side includes four functions: interest groups, learning materials, practical tasks, and message boards.

Interest group: Students click on the interest group module to enter the group selection area, and select the group they are interested in or want to know about to enter, such as the party history research group, which is filled with students who are interested in the development of my country’s party history and have researched. This group will arrange some small online activities every week [6], such as: small English composition, English oral debate and other small activities, to explore the development of my country’s communism. Every time you participate in an activity, the system will automatically give you a certain score, which can be accumulated. The system will count the scores at the end of the semester and display the scores in your personal information.

Learning materials: Download the learning materials prepared and released by the teacher and combine the knowledge of the textbook to preview and review the learned content. For example: download the English version of the names and introductions of the various red tourist bases in China published by the teacher, and translate and read them aloud. Not only can you practice your translation and writing skills, improve your speaking skills, but you can also understand the history behind these red bases and their contents. The heroic deeds of revolutionary heroes, and add your own opinions on the

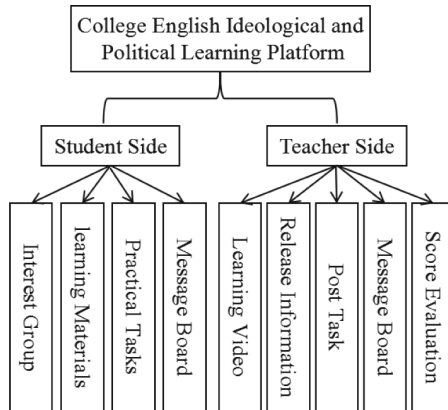


Fig. 5. Function Implementation

material, which is convenient for speaking in class. Gradually improve their ideological awareness in learning and summarizing.

Practical tasks: The teacher will upload some virtual practical tasks on a regular basis. Students click to view the practical tasks and complete the virtual practice according to the task prompts. For example: collect the requirements of young people in different periods in my country and make a summary in English (this can be done through text and video). Students can find relevant materials and organize them, translate them into English, choose their favorite way to complete practical tasks and upload them to the platform, and synchronize them to the teacher's terminal. The system will save.

Message board: Students enter the message board to express their own English ideological and political learning experience and experience, for students to refer to and make suggestions. If they write well, they will be praised by the teacher to accumulate experience points, and they will also put forward what they have encountered in learning. If you have any questions or concerns, please seek help from teachers and classmates.

The teacher side includes five modules: learning videos, publishing materials, publishing tasks, message boards, and score evaluation.

Learning video: Teachers can click on the learning video to select the video link to be learned, and then jump to the video page, such as: "The Evolution of my country's Ideological and Political Form and Consciousness", "How to Incorporate Ideological and Political Elements into College English Teaching" and other courses. Click to play to watch and learn, so as to improve your ideological and political literacy and the ability to combine ideological and political content with English teaching.

Release materials: According to the combination of the content learned on the platform and the actual teaching content, teachers edit some learning materials of ideological and political elements missing in the textbooks, such as: English version of anti-epidemic stories, English version of 2021 Chinese characters and deeds, etc., publish and upload to the learning platform is available for students to check and learn.

Publishing tasks: Teachers can regularly upload some English practice tasks with ideological and political elements for students to complete and submit for upload. Such as: collecting the patriotic deeds of young people from all over the country on May 4, 1919 and translating them into English, watching the TV series "Age of Awakening" and writing an English review of about 100 words, etc. After the student submits, click to view and give the corresponding comments and scores, and then upload it back to the student terminal.

Message Board: Click on the message board to view the messages that students have left for themselves and to reply and answer questions; you can also view the learning experiences and summed up experiences shared by students, and you can praise the students if you think they are excellent [2].

Score evaluation: The teacher will make a comprehensive score at the end of the term based on the students' performance in the classroom and the completion of homework, the final exam results, the scores of interest groups participating in activities, the scores of practical tasks and the experience value of the message board. For example: set the percentage of scores, 40% of the usual grades, 40% of the platform grades, and 20% of the final grades.

5 Conclusions

College English is one of the public courses with the widest audience. Reforming it and incorporating ideological and political elements is an important way to realize the innovation of the ideological and political system of the course. The college English ideological and political learning platform designed in this paper provides a good learning interaction environment for teachers and students, broadens the students' learning path, and improves the teachers' ability of ideological and political English courses. The learning materials released by teachers on the platform have made a good supplement to English teaching materials. Students participate in interest group activities and virtual practice tasks on the platform to improve their cognition and knowledge. The results are given through the accumulation of interest groups, practical tasks, message board scores and experience values, which fully mobilizes students' interest in learning and improves students' enthusiasm for independent learning. The reform of the scoring system provides ideas.

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