Optimization of Ideological and Political Education Path for College Students Based on Web Technology

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ABSTRACT

College students shoulder the mission of realizing the great rejuvenation of the country, and their ideological and political literacy is related to the future development. Therefore, the party and the state attach great importance to the ideological and political education of college students. At present, there are many bad situations in the educational path, which are not conducive to the ideological and political education of college students. In order to solve the problem of optimizing the path of ideological and political education for college students, this paper develops a platform of ideological and political education for college students based on web technology and b/s framework, in which the front-end design chooses Bootstrap framework, and the back-end development chooses ThinkPHP framework with MySQL database. Firstly, this paper gives a brief description of the present situation of ideological and political education, and on this basis, it optimizes its path by using the developed platform in combination with the current realistic environment, so as to learn from each other's strong points and make up for one's weak points, so as to improve the existing situation and realize the transformation of ideological and political education form for college students.

Keywords: *Web technology; optimization platform; ideological and political education; education status*

1. INTRODUCTION

"Ideological and political course is a key course to fulfill the fundamental task of moral education. Ideological and political course plays an irreplaceable role, and ideological and political course teachers have great responsibilities. Xi general secretary has chaired a school ideological and political theory course teacher conferences and delivered an important speech, starting from the global of the party and national undertaking development ", elaborated profoundly the do a good job in the significance of school education courses, to do a good job in the new era of school ideological and political work, cultivate new bear his national rejuvenation era provides fundamental to follow. [1] The Ministry of Education actively implements the general Secretary's ideological and political education policy of "Casting soul and educating people". Aiming at building a perfect ideological and political curriculum system, it vigorously carries out the work of changing ideological and political teaching forms and strengthening ideological and political teachers.

At present, there are many problems in ideological and political education in colleges and universities, such as single teaching form, boring teaching content and insufficient integration with current hot events, unprofessional teaching team, imperfect platform construction of ideological and political education, emphasizing theory over practice, weak interaction between teachers and students. Students don't understand the content and have low interest in learning, which leads to unsatisfactory ideological and political education in colleges and universities. [10] Improving the traditional form of ideological and political education, innovating the content of ideological and political education, enhancing the professionalism of teachers, stimulating students' interest in learning ideological education courses, and increasing the interaction between students and teachers are the key tasks of ideological and political education in colleges and universities. Taking the current situation as the starting point, taking the ideological and political education policy put forward by the state as the direction, we should boldly try various new ways and use the Internet to effectively change the teaching mode, strengthen the construction of teachers, and truly

optimize the path of ideological and political education. So as to cultivate a group of outstanding young people who can closely combine their life goals with the destiny of the country, the great rejuvenation of the Chinese nation and the rise and fall of the society, love the motherland and the people, and have noble ideological and political qualities and lofty ideals. [8]

The author thinks that it is a long process to improve the ideological and political quality of college students, and it is impossible to achieve it once and for all. According to the current social situation, we should accurately infiltrate all kinds of excellent cultures into the ideological and political education of college students, and strive to explore ways and outlets to improve the quality of ideological and political education, so as to keep up with the characteristics of the new era. Compared with the traditional classroom, the network platform has many advantages, such as abundant resources, high real-time information and strong interactivity. This platform for ideological and political education for college students based on web technology is developed on the basis of these advantages. Aiming at many existing problems, the path of ideological and political education is optimized. In the new era, ideological and political education for college students should break through the barriers of traditional education forms and keep pace with the times, combining theoretical ideological education knowledge with rich practical activities. The traditional face-to-face classroom is combined with the Internet platform, but the network environment is complicated, so using the platform for learning has both advantages and disadvantages. Therefore, we should optimize the path of ideological and political education to make it meet the requirements of the party and the state for the optimization of ideological and political education. [3]

2. TECHNICAL OVERVIEW

2.1. Front-end

The front-end object-oriented is mainly the user, that is, what we can see when we open the browser. Generally, the front-end is divided into two parts: front-end design and front-end development. The design is that designers roughly plan the UI interface layout of the whole website, then make detailed renderings, then fragment the corresponding UI interface in the drawings, cut the pictures, and then give them to front-end developers to complete the static page effect. The front-end development is the realization of the code part of the website, including HTML, CSS and JavaScript, which are three dominant technologies in front-end development. In the front-end development, HTML is used to define the elements in the layout of the page, CSS is used to locate the displayed elements, and then JavaScript is used to realize the corresponding effects

and interactions. The bootstrap framework selected in this paper is based on these three technologies. Next, this paper briefly introduces the three technologies of HTML, CSS, JavaScript and the bootstrap framework used.

2.1.1. Introduction to HTML

HTML(HyperText Markup Language) is a standardized markup language for creating web pages. The developer HTML is used to build a WEB site, through which the content of the web page is described. HTML runs on the browser, which parses and presents it. This paper selects the latest standard version of HTML HTML5, which adds new features to the original functions to achieve a smooth transition. HTML5 improves the original standard based on the principle of simplicity first. It not only simplifies the declaration of DOCTYPE and character set, but also strengthens HTML5 API to make the page design simpler, and defines the error recovery mechanism accurately. Even if there are errors in page editing, it will not affect the presentation of the whole web page. As shown in Figure 1, it is the standard template of HTML5. Because of its new features, more and more developers choose HTML5 as the page development language of the project.

```
<!DOCTYPE html>
<html>
<head>
    <meta charset="utf-8">
    <title></title>
</head>
<body>
<p>This is a paragraph</p>
<!--This is a comment-->
</body>
</html>
```

Figure 1: HTML5 template

2.1.2. Introduction to CSS

CSS(Cascading Style Sheets) is a language used to express the style of HTML web pages, such as setting the text content, the format of pictures and the layout of pages. It provides rich appearance display functions for HTML, and you can also set different styles in different browsers. The fonts, backgrounds, colors, etc. that users see when browsing the web are all decorated with CSS. This paper selects the latest version CSS3 to set up the page. This version provides many practical specifications, such as list and language modules, border background and color, etc. It can make the page more beautiful and contain rich animation effects, significantly improving the performance of the web page and the user experience.

2.1.3. Introduction to JavaScript

JavaScript is a scripting language, which evolved from LiveScirpt, and is used to define the behavior of web pages and add dynamic effects to them. When users use web pages, the drop-down menu, image carousel and other effects they see are all defined and implemented by JavaScript. JavaScript can make web pages highly interactive. It simplifies the repeated HTML paragraphs and reduces the download time. JavaScript can respond to the user's actions in time, and it can check the forms submitted by users immediately, without wasting time and passing CGI verification. As long as developers are creative, they can discover its endless features.

2.1.4. Bootstrap framework

Bootstrap framework is a front-end open source toolkit, which is introduced to solve the problems caused by front-end responsive design. Responsive design is for users to have a comfortable experience with different terminals, but for developers, there are troubles such as heavy workload and cumbersome code. Using Bootstrap framework can reduce the troubles caused by responsive design. The author chose this framework because it can be supported by all mainstream browsers and provides the basic structure with grid system, link style and background. It defines a series of CSS styles and corresponding jQuery codes in advance. When using it, you only need to write a fixed HTML structure, and then call the class name in Bootstrap to achieve the desired effect, which is convenient and quick, and reduces the workload of writing codes. As shown in Figure 2, the navigation of teacher's page designed with bootstrap framework has the advantage of reducing the amount of code written by the author compared with the traditional CSS beautification page.

```html
<!DOCTYPE html>
<html>
<head>
    <title>Navigation page</title>
<link                    rel="stylesheet"                    type="text/css"
href="bootstrap-3.3.7-dist/bootstrap-3.3.7-dist/css/bootstrap.min.css">
</head>
<body>
<nav class="nanbar navbar-inverse navbar-fixed-top" role="navigation">
    <div class="container">
        <div class="navbar-header">
            <button      type="button"      class="navbar-toggle"      data-toggle="collapse"
data-target="navbar-collapse">
                <span class="sr-only"></span>
                <span class="icon-bar"></span>
                <span class="icon-bar"></span>
                <span class="icon-bar"></span>
            </button>
            <a href="index.html" class="navbar-brand">Teacher-end</a>
        </div>
        <div class="collapse navbar-collapse">
        <ul class="nav navbar-nav navbar-right">
            <li class="active"><a href="#">Home</a></li>
            <li><a href="#">Current political hotspots</a></li>
        <li><a href="#">Upload materials</a></li>
        <li><a href="#">Release task</a></li>
        <li><a href="#">Online training</a></li>
            <li><a href="#">Communication group</a></li>
        </ul>
        <form class="navbar-form navbar-right">
            <input type="text" name="" class="form-control" placeholder="Enter what you
want to search for">
        </form>
        </div>
    </div>
</nav>
</body>
</html>
```

Figure 2: Teacher-end page navigation code

2.2.   Back-end

2.2.1. PHP language

PHP(Hypertext Preprocessor) is an embedded scripting language running on the server, and it is a mainstream language used in the Web platform. It is mainly used in the development of Web dynamic website platform. Although the PHP code is executed on the server, the result is returned to the browser in the form of HTML, and the extension of PHP file is ".php". PHP is not limited to outputting HTML, but can also output images, PDF files, movies in Flash format, XHTML and XML. It can operate and access the database, and usually cooperates with MySQL database for project development.

2.2.2. ThinkPHP framework

The role of PHP framework is to improve the development efficiency in project development, reduce the repetitiveness of developers in writing codes, and thus improve the stability of programs. According to different characteristics, it is divided into various frameworks. This paper chooses ThinkPHP framework, which is compatible, fast and simple. It not only improves Struts framework, but also incorporates many foreign high-quality frameworks and patterns. ThinkPHP is based on MVC design pattern and supports multi-tier design. As shown in Figure 2, the MVC design pattern is realized with ThinkPHP. The user makes a request, index.php receives a command to call index.class.php to read the data, DB.class.php responds to the request and returns the data to index.class.php, index.class.php receives the data and then returns the

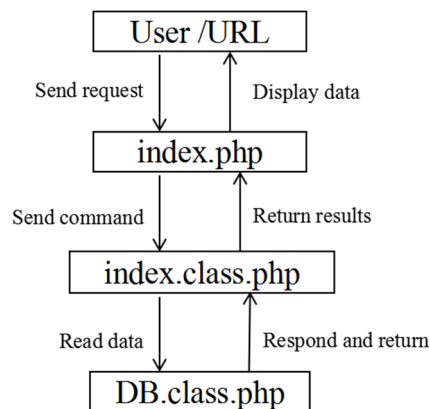result to index.php, and finally index.php displays the data to the user.

Figure 3: The MVC pattern under the ThinkPHP

2.3.   SQL language and MySQL database

SQL (Structured Query Language) is used to manage and maintain relational database management system. The management authority of SQL includes inserting, querying, updating and deleting data, establishing and modifying database schema and controlling data access. MySQL is the most commonly used relational database management system in back-end development, and it is one of the best relational database management system application software in the application of WEB technology. Instead of putting all data in a data warehouse, MySQL establishes multiple tables to store different data separately. The purpose of this is to increase speed and flexibility. It is usually used with PHP language to complete the back-end development of the project. As shown in Figure 3, PHP code is used to create a MySQL database, and the server host address, user name and password of MySQL are set.

```
<?php $dbhost = 'localhost'; // mysqlServer host address
$dbuser = 'root'; // mysql User name
$dbpass = '123456'; // mysql User name password
$conn = mysqli_connect($dbhost, $dbuser, $dbpass);
if(! $conn ) { die(' Connection error : ' . mysqli_error($conn)); }
echo 'Connection success<br />';
$sql = 'CREATE DATABASE RUNOOB';
$retval = mysqli_query($conn,$sql );
 if(! $retval ) { die('Creating the database failed: ' . mysqli_error($conn)); }
echo "RUNOOB database created successfully\n"; mysqli_close($conn);
 ?>
```

Figure 4: Creating database code

2.4.   Development environment

Next, the main technologies mentioned above are used to deploy the development environment of this paper. This time, all environments are installed and run under the Windows operating system. The front-end design uses bootstrap framework, enter official website to download the latest version 5.1.3 of bootstrap, and

download related precompiled compressed files containing Bootstrap CSS, JavaScript and fonts and the required compiled LESS files. After decompression and installation, the configuration is completed by introducing Bootstrap files into the front-end code editor. Back-end uses thinkphp framework, download and install ThinkPHP version 5.0 framework and integrate it on Apache for configuration. After completion, copy it

to the directory of the built project, configure environment variables for PHP, and add the directory address of PHP to the environment variables of the system. After configuring environment variables, open cmd console and enter php -v to view the corresponding version information, open PHP extension, and then enter php -m to view available modules. After downloading the composer program, put the composer.phar file in the root directory of the corresponding php, enter the cmd console again, enter echo @ php "%~dp0component.phar"% * > composer.bat to create a bat file, and enter composer config-g repo.packagist composer https://mirror address to switch the mirror address. Download MySQL5.5.43, the database operating system, and configure environment variables for it. Download and install phpMyAdmin5.2.0 version, and use it to manage MySQL database operations.

3. REQUIREMENTS ANALYSIS

3.1.   *System requirements analysis*

In view of the demand of optimizing the path of ideological and political education for college students, on the one hand, we should change the teaching mode and strengthen the construction of education team; on the other hand, we should stimulate students' interest and increase their emphasis on ideological and political education. According to the needs of these two aspects, the design of this paper is also carried out from two aspects, one for teachers and the other for students. [6] Teachers screen the more important hot issues, make videos or articles and publish them on the platform, and upload courseware and expansion materials related to ideological and political courses, so as to facilitate the next classroom explanation. After the end of the course, teachers will issue relevant practical tasks according to

the course content, and strengthen their professional level through online training. Interact with students through online communication groups to get closer. Students watch the hot current affairs released by teachers to expand their ideological and political knowledge, and download reading courseware and extracurricular knowledge. And upload the practical tasks issued by teachers, so as to better understand the content of ideological and political theory course. Evaluate teachers' teaching level regularly, and improve teachers' ability to receive better ideological and political education. Communicate and discuss with classmates and teachers in the communication group, and ask questions and own ideas. [5]

3.2.   *Global design*

The path optimization platform of ideological and political education designed in this paper is developed by B/S mode based on Web technology. The front-end design selects bootstrap framework, and the back-end development uses PHP language to choose ThinkPHP framework with MySQL database. As shown in Figure 4, when users log in under the B/S architecture, users need to authenticate themselves to different modules after entering the platform through the browser. As this platform adopts real-name registration system login, users need to input ID number and password and submit login request. The application service on the server side responds and processes the request by using the relevant PHP technology, and calls the data information in the database service on the server side to verify login identity. The database service responds and processes, and returns the corresponding results. According to the results, the application service tells users whether they have passed the authentication and can successfully log in through the browser.
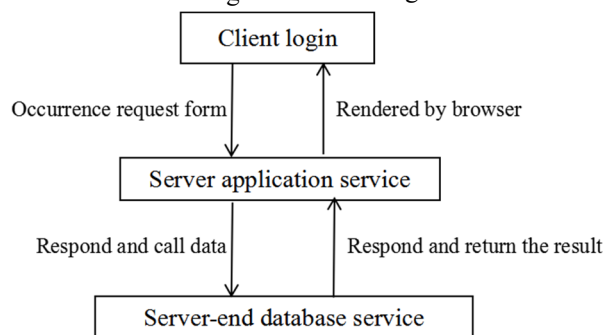
Figure 5: User login under the B / S architecture

4. FUNCTION REALIZATION

The design of this platform is divided into two parts according to the requirements, namely the teacher module and the student module, as shown in Figure 5.

4.1.   *Teacher module*

Teachers can enter the ID number and password for real-name authentication. After entering the home page, they can do the following:

Current political hotspots: Click on the current political hotspots to enter the editing interface, and you can publish videos or articles. Because the information

on the Internet is difficult to distinguish between true and false, students are easily biased by some false information in the browsing process. [2] To avoid this situation, teachers can screen the real and effective current political hotspots on the Internet and news in the near future, summarize them by combining the theoretical knowledge in the classroom and books, edit them into videos or articles, and publish them on the platform for students to read, such as the current social events (fighting the epidemic, getting rid of poverty and getting rich, rural revitalization, etc.). First, it can increase the effectiveness of classroom content. Second, it is convenient for students to better understand abstract theoretical knowledge, so as to improve students' enthusiasm for studying ideological and political courses.

Upload materials: Click to upload the courseware of expanded materials related to the ideological and political course, such as China's excellent traditional culture, stories touching Chinese characters, educational publicity materials with red themes, etc. [4] First, students can better understand the content of the course through expanded knowledge. The second is to let students review the previous knowledge and preview the knowledge they will learn, so as to facilitate the explanation in the next class.

Release task: Whenever the course ends, release some interesting practical activities based on the content and hot spots learned that day, so that students can complete them, such as fun debate contest, patriotic short video contest, photo contest of finding good people around them, etc. After the students have finished submitting, review and return the results and opinions. Make the ideological and political theory course no longer boring and difficult to understand.

Online training: After students evaluate teachers, arrange online unified training according to the results, and invite famous teachers to preach and teach, so as to strengthen the professional level and teaching ability of teachers.

Communication group: Teachers can click into the communication group to view the topics discussed and questions raised by students, and answer them one by one, which reduces the communication barriers caused by identity pressure in face-to-face meetings, increases the interaction between teachers and students, and promotes the relationship between teachers and students.

4.2. Student module

Students can enter the ID number and password for real-name authentication. After entering the homepage, they can perform the following operations:

Current political hotspots: Click to view the actual current political hotspots screened and summarized by teachers, and read them in combination with textbooks and classroom contents, so as to deepen the understanding of theoretical courses and improve the interest in course learning.

Learning materials: Enter to this page to download and browse the courseware about ideological and political courses uploaded by teachers, expand knowledge, consolidate what you have learned, preview what you will talk about, expand your knowledge of ideological and political courses, and improve your learning efficiency.

Practice task: Click enter to view the practice task issued by the teacher, submit and upload it after completion, synchronize it to the teacher module, and view the results after the teacher reviews the feedback.

Evaluation questionnaire: Click enter to score and evaluate your ideological and political teacher, such as the teacher's situation in class, the degree of understanding of the course, etc. After completing, upload it to the platform. [7]

Communication group: Click to enter the communication group to publish their questionable content or learning experience, and exchange and interact with classmates and teachers, so as to find the fun of ideological and political study in the process of communicating, asking questions and solving problems.
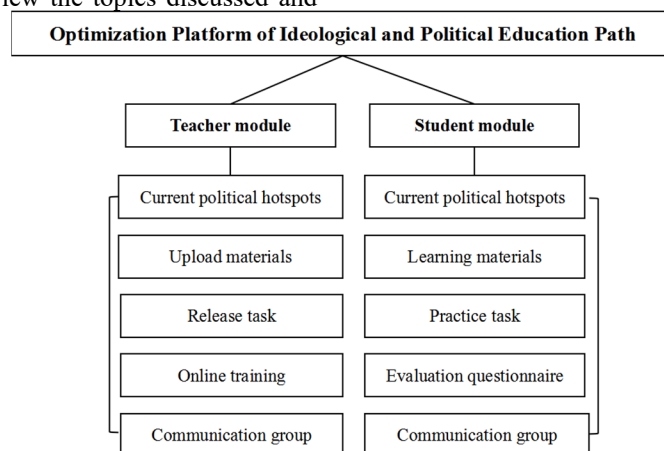

Figure 6: Ideological and political education path optimization platform

5. CONCLUSIONS

The development of web-based optimization platform for ideological and political education for college students has changed the teaching form, expanded the knowledge beyond the original book contents, and combined with current affairs hotspots to make it more effective. Training teachers according to students' assessment improves the overall level of the teaching team, and the theoretical knowledge and practical tasks are closely combined. Online communication increases the interaction between teachers and students, stimulates students' learning interest and enthusiasm, and optimizes the path of ideological and political education on the basis of traditional forms. [9] The platform helps students establish a correct outlook on life and values, improves the cultural quality of college students, meets the requirements of the state for cultivating new youth in the new era, and trains a number of high-quality talents for socialist construction.

REFERENCES

[1] Cao Jian.(2022)The Construction of Ideological and Political Courses has Undergone a Fundamental Overall Change and Achieved Historic Achievements-grinding a Lesson in Three Years and Creating a New Chapter in Educating People.People's Daily.03.

[2] Dai Ye.(2021)The Value of Excellent Chinese Traditional Culture in College Students' Ideological and Political Education.Sinogram Culture.11.

[3] Dong Qi.(2021)The Optimization Path of Improving College Students' Sense of Gain in Ideological and Political Education.Journal of Heihe University.12.

[4] Guo Jing.(2020)Construction and Innovation of Practical Education Mode of College Students' Ideological and Political Education.Comparative Study of Cultural Innovation.04.

[5] Shi Fei.(2020)The Integration of Excellent Chinese Traditional Culture and Ideological and Political Education of College Students.Media Forum.03.

[6] Sun Fengjuan.(2021)Innovation Analysis of Ideological and Political Course in College Students' Ideological and Political Education.Writer's world.10.

[7] Xi Mingxuan, Zhang Lihui.(2015)The Education of National Unity and Progress is the Inherent Requirement of Cultivating and Practicing Socialist Core Values.China Ethnic News.09.

[8] Yang Liu.(2021)Research on the Cultivation Path of College Students' Cultural Confidence in Ideological and Political Education.Journal of Kaifeng Vocational College of Culture and Art.09.

[9] Yu Beibei, Lu Shucheng.(2015)The Significance of Family Heritage in Cultivating and Practicing Socialist Core Values.Journal of Soochow University Philosophy & Social Science Edition. 05.

[10] Zhou Keliang.(2021)Research on the Implementation Path of College Students' Ideological and Political Education under the Background of "internet plus".Journal of Liaoning Radio & TV University.03.