Design and Application of Online Teaching Platform for Ideological and Political Education in Colleges and Universities Based on PHP

Jianzhen Yin(✉)

Zaozhuang University, Zaozhuang 277100, Shandong, China
2968295183@qq.com

Abstract. The fundamental task of higher education is to cultivate people by virtue, among which virtue should be the primary task. College students' thoughts are still in the development stage, and they need correct thoughts as guidance. Accordingly, this paper constructs an online teaching platform for ideological and political education in colleges and universities based on PHP. Linux is selected as the system development environment, PHP is used as the script language for platform development, and ThinkPHP framework is introduced to improve the system functions of the teaching platform. Finally, it uses qualitative and quantitative analytic hierarchy process (AHP) to calculate the practical results of ideological and political education, and uses functional linear regression model as the statistical basis of the practical data of ideological and political education to further optimize the teaching system of ideological and political education in colleges and universities.

Keywords: ideological and political education · teaching mode · AHP analytic hierarchy process · PHP · B/S architecture

1 Introduction

With the development of science and technology, there are more and more ways to spread ideas. College students are in a critical period of thinking development, and they have not yet formed a clear standard for judging various ideas, so they need correct ideas as guidance. As the foundation of national education and quality education, ideological and political courses in colleges and universities should keep pace with the development of the times, update the teaching mode in time and enrich the teaching content, so as to promote the influence and timeliness of ideological education in colleges and universities and help students establish the correct three views [1]. But as far as the current development of ideological and political education in colleges and universities is concerned, there are still the following problems: First, the teaching resources of ideological and political education in colleges and universities are outdated. Because of its particularity, ideological and political education is often updated quickly, and the content of book knowledge is fixed, so it is difficult to update it in real time. Teachers and students

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have fewer ways to obtain high-quality ideological and political resources. Secondly, the evaluation system of ideological and political teaching is not perfect. The traditional evaluation system of ideological and political teaching is based on summative evaluation, ignoring students' process learning. This leads to the differentiation between teaching results and teaching process, which is not conducive to the all-round development of students.

In view of the above problems, this paper constructs an online teaching platform for ideological and political education in colleges and universities based on PHP. This platform uses the advantages of digital electronic technology to incorporate video, audio, courseware and exercises into the teaching system, forming an integrated teaching environment, thus improving the learning efficiency of teachers and students [2].

2 Key Technologies

2.1 PHP

As a popular Web application development language, PHP combines the characteristics of C language, Java and Perl and creates its own grammar. It can directly embed programs into HTML for execution, and its execution efficiency is much higher than CGI. It can encrypt and optimize code operation to improve the running speed, which is more suitable for the design and development of dynamic pages [3].

2.2 Development Environment

According to the requirements of the above related application technologies, the development environment of online teaching platform for ideological and political education in colleges and universities based on PHP is configured and deployed. The development of this platform is based on Web technology, with linux as the system development environment, Apache server as the Web server, PHP as the scripting language for platform development, and ThinkPHP framework as the introduction to improve the platform [4]. Think-orm ORM class library extension, think-oracle Oracle driver extension and think-soar SQL statement optimization extension are adopted to enrich the platform functions. Using MySQL to realize data storage and expand platform content [5]. Through the introduction of the above key technical theories, the overall environment of system development, the configuration of related software and tools are determined, and the technical feasibility of building an online teaching platform for ideological and political education in colleges and universities based on PHP is also clarified.

3 Function Realization

3.1 Online Learning Module

Users who use this system for the first time need to register, and they can log in after completing the user registration according to the relevant prompts of the system. Users who log in successfully can use the detailed functions of the system. On the homepage of the module, click on the self-study section, where users can select the content of interest according to the sections for learning. The system will record the user's stay time and browsing trace, and generate chart 1 to get the user's browsing preference [6] (Table 1).

Table 1. Statistics of recent browsing data of users

Course name	Browse times	Number of speeches	Mean viewing time
Outline of Modern Chinese History	41	39	35.2 min
Lesson 1 of Ideological and Political Education	35	24	27.6 min
Basic Principles of Marxism	54	27	33.9 min

$$R_i = \sum_t \frac{K_t + I_i}{(t+1)^s} \tag{1}$$

Among them, the recommendation of courses involves heat calculation, that is, the popularity and quality of courses are determined according to the number of students' views. The calculation formula used here is shown in Formula 1. Among them, R_i represents the popularity of various resources, K_t represents the number of course views, I_i represents the initial quality of video, s represents the propagation speed of resources, and t represents the time [7]. Finally, recommend corresponding courses for them, such as "Outline of Modern History of China" and "China in Lights" to literature and history lovers.

3.2 Thinking Promotion Module

In order to further improve the information literacy of teachers and students and innovate the teaching mode of ideological and political education, this module is specially designed as a thinking promotion section. In this module, users can read independently with the help of electronic digital library, enrich their spiritual world and build correct thinking habits [8]. The system sets a reasonable reading amount for each user, and different chapters represent different scores, and the final score of the user will be included in the usual grades [9]. Users can leave their thoughts in the comment area after completing the reading task, or communicate with other users in a friendly way with the help of the communication function. The implementation code of online communication function is shown in Fig. 1.

A healthy psychological state is the basis of promoting students' all-round development, and a psychological counseling module is specially set up for contemporary college students' psychological problems and emotional problems. In this module, mental health knowledge and psychological counseling are the main contents. Mental health knowledge is mostly based on basic content, presented to students in an intuitive way such as pictures and videos, so as to ensure that students and users can make simple self-emotional adjustment and maintain a healthy psychological state after learning mental health knowledge.

```
<!DOCTYPE html>
<htmllang="en">
<head>
        <meta charset="UTF-8">
        <title>Problem study</tile>
        <link type "tetxt/css" rel"tylesheet" href "ISTest4.css" />
</head>
<body>
<div class="bbs">
     <header>< span ondlick-"TWantPos0">I want to post</span></header>
     <sectlon>
       <div>
```

Fig. 1. Implementation code of online communication function

Table 2. Evaluation results of students' learning effect

Target layer	Standard layer	Weighted value	Score	Final score
Online learning effect score	Course learning a	$a_{11} = 0.063$	0.923	0.845
	Book reading b	$b_{21} = 0.137$	0.981	
	Practical activity c	$c_{31} = 0.191$	1.034	

The system adopts multi-dimensional evaluation method to evaluate students' comprehensive scores, and its evaluation score is calculated by AHP, which combines qualitative and quantitative methods. The formula for calculating the final total score is shown in Formula 2. Final score P = usual score C + final score Q + teacher's score J, r represents the scores of assessment points in different degrees, and i is the confidence of process evaluation. The evaluation results of students' online learning effect are shown in Table 2 [10].

$$P = \sum_{i} \left[(q_r \times 30\%) + (c_i \times 30\%) \right] + \sum_{r} (J \times 40\%) \tag{2}$$

4 Conclusion

With the further development of digital teaching, ideological and political education in colleges and universities should make timely use of the current resource advantages, try to improve the teaching system of ideological and political education in colleges and universities, and innovate the original teaching mode. The online teaching platform of ideological and political education in colleges and universities based on PHP is a resource expansion of offline ideological and political education. The focus of ideological and political education in colleges and universities has also changed from student-oriented learning to joint learning between teachers and students, so that teachers and students can make progress together and further promote the development of high-quality education in China.

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