

Analysis and Improvement of Ideological Education of Contemporary College Students Based on web Technology

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Abstract

As the key talents in the future construction of our country, college students' development is related to the future of our country and nation. During their growing up, they have all kinds of cognitive and ideological puzzles, so there are great differences in their awareness of problems. The complicated social environment and individual differences of students put forward higher requirements for ideological education in universities. For teachers, if they want to do a good job in ideological education, they need to have a certain understanding of the ideological status quo of college students. This paper develops a platform for analyzing and improving the current situation of college students' ideological education based on web technology. Based on B/S architecture, it uses front-end interaction, HTML+CSS+JavaScript language to design and beautify the front-end page, and PHP and ThinkPHP framework are selected at the back-end to realize various functions, and MySQL database is used to realize data storage and management. This platform is developed to help teachers analyze the ideological status of contemporary college students, and combine the analysis results with targeted teaching, so as to improve students' ideological literacy.

Keywords: ideological education; web technology; analysis; improvement

1. INTRODUCTION

According to the current achievements of ideological education and the overall social development background, General Secretary Xi Jinping pointed out that to make good use of classroom teaching as the main channel, ideological and political courses should be strengthened through improvement, so as to enhance the affinity and pertinence of ideological and political education, and meet the needs and expectations of students' growth and development. Other courses should keep a section of canal and plant a responsible field, so that all kinds of courses and ideological and political courses can walk in the same direction and form a synergistic effect. [2]

The university stage is the basic stage for people to establish three views and know the world, and it is the stage when they are faced with all kinds of temptations and it is difficult to distinguish right from wrong. Contemporary college students witness the development of the Internet and grow up with it. The network they are exposed to and the real environment are complex and

changeable, which has many negative effects on their ideological and psychological development. This generation of college students are mostly only children, who have enjoyed excellent living conditions since childhood. Because they are influenced by family, society, network, education and other environmental factors, they have formed obvious individual differences. [1] This generation of young people has an active personality and ideas that can't be reached in the past. The diversification of social values and network information makes it difficult for them to distinguish the true and false information from the good and evil of human nature. Therefore, ideological education is of great importance and should not be underestimated. In order to fully implement the instructions of the general secretary, colleges and universities should give full play to the leading role of classroom teaching, and at the same time, they should combine practical experience to meet students' needs for ideological education and expand the effective ways of ideological education for college students in the new era. Ideological education for contemporary college students can't only be carried out in the form of imparting outdated ideological

education knowledge, but should be taught according to students' individual differences. If you want to implement this program, you need to investigate the students' ideological characteristics, understand their thoughts and thoughts, and analyze their behavior and personality characteristics, so as to educate them in a directional way. Through ideological education, we can help them to establish correct three views, exercise their ability to distinguish right from wrong, and cultivate them into patriotic, dedicated, honest and friendly outstanding young people, so that they can shine for socialist construction in the future.

The author believes that teachers can conduct research on students' ideological status on the web platform, and timely understand and gain insight into students' ideological and moral situation by viewing the analyzed research data, so as to formulate relevant teaching plans and give students more specific and targeted guidance. Create various activities for students to actively participate in, further improve students' subjective initiative, try their best to guide students' negative psychology and negative behavior, and make college students' thoughts form correct cognition. [7]

2. TECHNICAL OVERVIEW

The platform developed in this paper involves three technologies: front-end page design, back-end function realization and database technology.

2.1. Front-end page design: HTML+CSS+JavaScript

HTML, as a hypertext markup language, is used to create web pages that display words and images and describe them. HTML also provides a variety of tags such as paragraphs, titles, hyperlinks, pictures, etc. The corresponding tags are used to describe the content to be defined in the webpage. It connects web pages with various link elements such as websites through various "hyperlinks" to form various web pages. The latest version is HTML5, which, as the standard of the next generation web page, is defined as one of the cores of Internet technology.

CSS is a cascading style sheet, which is used to set the text content, image shape and page layout of HTML pages. It can also be understood as a tool to decorate HTML pages. It can also set corresponding styles for different browsers. The fonts, colors, backgrounds, etc. that we usually see when browsing the web are all set with CSS. Set font size and button style with CSS as shown in figure 1. At present, the latest version is CSS3, which adds a lot of new usage specifications. Using CSS3 to decorate and beautify the web page in web page development can improve the user's experience when browsing the web page.

```

CSS decoration
/*Widescreen input field*/
input[type=tel], input[type=password]{
    width: 100%;
    padding: 12px 20px;
    margin: 8px 0;
    display: inline-block;
    border: 1px solid #ccc;
    box sizing: border box;
}
/*Style all buttons.*/
button {
    background-color: #4CAF50;
    color: white;
    padding: 14px 20px;
    margin: 8px 0;
    border: none;
    cursor: pointer; /*The cursor appears as a pointer indicating a link (one hand)*/
    width: 100%;
}
button:hover{
    opacity: 0.8; /*Sets the opacity level of the div element/
}

```

Figure 1: CSS partial code

JavaScript is a scripting language used in web pages. HTML+CSS generates static pages, and JavaScript is used to transform such static pages into dynamic pages for user interaction and response to events. In the development of website platform, if HTML is regarded as the skeleton of human body and CSS as clothes for decoration, then JavaScript is the nerve that allows them to move and communicate. The JavaScript code can be embedded in HTML code or created as an independent. js file. Combining these three languages can generate beautiful and practical web pages, and all three languages are indispensable.

2.2. Database technology and MySQL database

Development of the platform requires not only front-end page design and back-end function realization, but also database design, which holds the core of the platform information system. Database is a kind of container dedicated to storing and maintaining data, while database technology is responsible for studying how to organize, store, acquire and process data. Mysql is a SQL database management software created by applying database technology. It is a relational database management system, and its advantages are open source, free of charge, small size and high speed. In this paper, PHP language is used in the design, and MySQL database has a high degree of matching with it, so MySQL database is selected. Figure 2 shows the code for creating the student information table by using the part edited by MySQL.

```

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)
  stubirth varchar(100),
  (year-month-day-hour-minute)
);

```

Figure 2: Part code of the student information table

2.3. Back-end function realization: PHP and ThinkPHP framework

PHP (Hypertext Preprocessor) is a scripting language, which is applied to the server side. It is one of the most used scripting languages in website construction, and most websites we see are developed with it. When developing a website with PHP, you can program by defining classes and objects. PHP supports the connection of open databases such as Mysql, SqlServer and Oracle, among which PHP and MySQL are the best, so developers use MySQL database to operate SQL statements when programming with PHP.

PHP framework is an open source framework based on PHP language development. It was born to simplify application development, and its characteristics are fast, compatible and simple. [9] ThinkPHP can be used on windows/Unix/Linux and other operating systems. It combines the object-oriented programming idea and MVC design pattern, and encapsulates the routine operation of the database. The interaction process shown in Figure 3 is the design pattern of MVC. ThinkPHP has no special module requirements, and the requirements of the system running environment are determined by the modules used for development. ThinkPHP, as a whole development framework, can solve most of the needs of system development, because it contains many components that are often used in development, such as the underlying architecture, compatible processing, database access layer, role authentication, form processing, etc., and can realize cross-platform and cross-database transplantation and other functions.

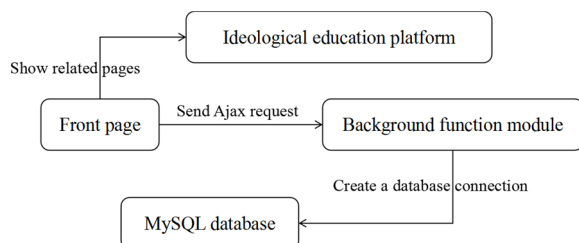


Figure 3: Interaction process

2.4. Development environment

Next, the development environment is installed and coordinated according to the above key technologies, and all functions are realized under the Windows operating system this time. Dreamweaver is the page editing tool selected for the front end of the page. This time, Adobe Dreamweaver CS6 version is selected. After the software is installed, you can directly enter editing. Back-end functions use PHP language, which needs to be built on Windows: Apache server and PHP software need to be installed. Download Apache version 2.2.29. Before installation, you need to modify the configuration file, change the path in the configuration file to your own storage path, and find the # ServerName www.example.com:80. After removing the #, you can install it. Download PHP version 5.6, unzip it, run php.exe, and finally introduce PHP template into Apache. Download MySQL version MySQL5.5.43 and configure environment variables for it as prompted. Download and install phpMyAdmin to manage the operation of MySQL database. As thinkPHP is used, it is necessary to download its architecture package and deploy its configuration on Apache. Through the environmental deployment of all technologies, the technical feasibility of the platform for the analysis and promotion of ideological education of contemporary college students based on web technology is established.

3. DEMAND ANALYSIS

3.1. Specific demand analysis

Based on web technology, the platform of college students' ideological education, through the design of front-end page and back-end function combined with MySQL database technology, is designed to help teachers understand the present situation of contemporary college students' thoughts and form data for analysis, so as to adjust the ideological education work and prescribe the right medicine to carry out ideological education work. [6] Teachers use the way of investigation to get students' information, and the content of the investigation is written by teachers according to specific conditions. This paper designs a platform for analyzing and improving the current situation of college students' ideological education, and obtains their ideological characteristics by conducting research on college students to form data. The research of this platform is mainly carried out by questionnaire and personal information form. Students are investigated by filling in objective questionnaire and subjective personal information form. After students fill in the research information, the platform will present the data to teachers in the form of charts, so that teachers can see the results intuitively, thus avoiding the problem of teachers' increasing workload due to data clutter [3]. By looking at these data, students have a preliminary

understanding, and then students' needs and puzzles at this stage can be analyzed to adjust the course content. Teachers can also use real-time Q&A (discussion group) and non-real-time Q&A (message board) to communicate and interact with students, so as to bring the distance between teachers and students closer and better understand the students' situation. After understanding the students' situation, we should take corresponding guidance and teaching measures, and interview the backward students to guide them to the correct ideological track. When issuing tasks, choose activities that students are interested in as much as possible for virtual practice, so that students can have a practical direction. Use online learning and academic discussions with peers to improve your business level.

Students can fill out questionnaires and personal information forms through this platform, and fill them out according to their actual situation and needs, so as to convey their growing confusion and recent troubles to teachers, and seek their help and guidance. Make use of real-time discussion and non-real-time discussion to present your own demands to teachers and discuss recent experiences with peers. [4] By completing teachers' practical tasks, we can better understand the significance of ideological education, and apply abstract theoretical lessons to concrete practice to improve our ideological and moral cultivation. If you don't understand what the teacher said in class, you can also review what you have learned through online learning.

3.2. Global design

Based on Web technology, the college students' ideological education platform developed by B/S mode includes three parts: front-end page design, back-end function realization and database construction. The front-end page design adopts HTML+CSS+JavaScript to design the page, which makes the page look beautiful and vivid. The back-end function is realized by using PHP language and ThinkPHP framework to design the required functions. Because ThinkPHP framework integrates many design ideas and patterns, it solves many back-end design needs. MySQL database with PHP language can store and process information well. This design adopts MVC design pattern. As shown in Figure 4, the browser/client sends an access request to the server. The controller layer intercepts the URL, looks at the request in the URL and calls the corresponding model layer. The model layer sends an access request to MySQL database, which responds to the request and returns the result to the controller layer. The controller layer calls the relevant code of the View layer to render the result. Finally, the View layer presents the rendered result to the user's page. Based on the principle of reliability and high performance, this design analyzes the present situation of college students' thoughts and designs different functional modules to

understand the ideological characteristics of contemporary college students and improve the present situation of college students' ideological education.

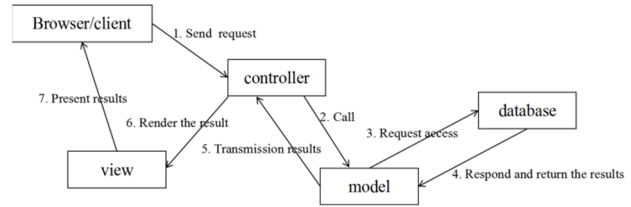


Figure 4: MVC pattern interaction

4. FUNCTION IMPLEMENTATION

The ideological education platform for college students developed in this paper is divided into two modules according to the current situation and needs: the student module and the teacher module, as shown in Figure 5.

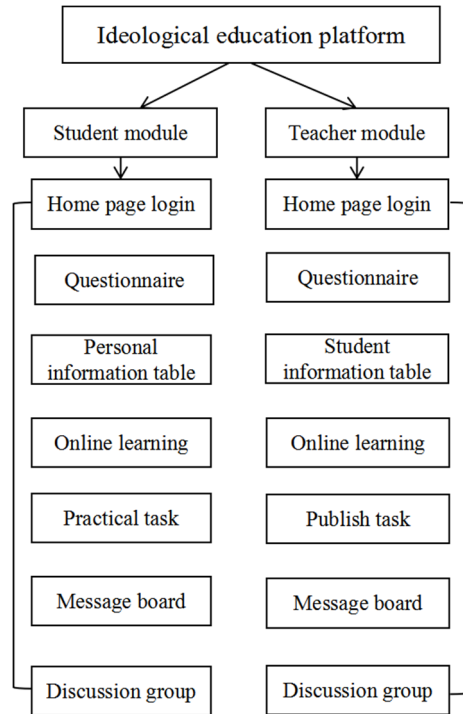


Figure 5: Function module

4.1. Student module

Students log in to the home page by entering their student ID and password. When logging in for the first time, they need to fill in the questionnaire and personal information form. Some of the contents only need to select the corresponding options, while others need to be filled out by themselves, such as whether they feel they have the spirit of innovation and exploration, how good or bad things are, what are their pursuits for life, what are their personal ideals and beliefs, do they feel strong sense of independence, what are their shortcomings,

what kind of state they are in when interacting with others, and are their self-esteem easily frustrated? Complete the form and click Submit. [8] Click on online learning to enter this page. There are learning materials and videos of our school, as well as video courses of other famous teachers. Select the corresponding course and click enter to learn. Click on the practice task to see the online virtual practice tasks published by the teacher, such as shooting short videos with classmates, searching for information to participate in online debates, and publishing related articles according to topics. After completing the task, the relevant content materials will be uploaded to the system, and automatically synchronized with the teacher's end, so that students can get the teacher's guidance and judgment conveniently. Click on the message board function to leave a message, or you can view other people's messages and comment. Click on the discussion group to view the dialogue and discuss the topics you are interested in in real time. Both functions can @ teacher, which is similar to the form of raising your hand to ask questions in class. [5]

4.2. Teacher module

Teachers can enter the homepage of the platform by entering their own work number and password, and click on the student information form to view each student's personal information. Click on the questionnaire, enter the editing page, and edit it according to the direction you want to know. The investigation of students can be carried out from the following aspects: the spirit of personal innovation and exploration, the ability to distinguish between good and bad things, the pursuit of life, personal ideals and beliefs, self-independence, the ability to communicate with others, self-esteem, the ability to resist repression, hobbies, personal views on love, etc. Through these data, we can analyze the outstanding problems existing in the current college students' ideological characteristics, and carry out college students' ideological education in a targeted way. After publication, teachers can view the results after students fill out the two survey forms. Click Statistics to generate the questionnaire analysis form and student information statistics chart, and adjust the teaching content and teaching direction of ideological education course according to the results. Click online learning, teachers will enter the learning page, and they can upload their courseware and teaching videos by clicking publish video materials. By clicking watch videos, they will enter the off-campus course learning page, and select videos that they are interested in or want to improve to watch. After learning, they will publish their own experiences for peer discussion. [10] Click publish task to enter the task editing page, and publish some practical tasks related to ideological education, such as short video contest, theme debate contest, and essay writing on hot topics, based on the data analyzed by questionnaires and personal

information forms, in combination with students' behavioral preferences. After students finish, they can check and guide and return their evaluation opinions. Click on the message board, you can see students' messages, click reply to reply to them, or click publish to publish your views for students and peers to discuss, and click on the discussion group, you can see the messages that students give themselves, the topics they talk about and their respective views. After checking the results, online interviews are conducted with students who have deviations in their thinking and cognition, which avoids the embarrassment of face-to-face communication and the pressure caused by identity disparity, and makes it easier for students to open their hearts.

5.CONCLUSIONS

Based on web technology, this paper designs a new ideological education platform. Teachers can obtain relevant information by investigating students' ideological situation, and obtain data in the form of charts for teachers to analyze, so as to understand students' ideological status, and carry out targeted ideological education according to the analyzed problems, so as to enhance students' ideological consciousness through education and guidance. The overall design meets the needs of teachers and students, changes the present situation of ideological education of college students, improves their ideological and moral quality, and helps them establish correct three views. It has contributed to the goal of cultivating a group of outstanding young people who love the motherland and the people with noble character and lofty ideals.

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