Design of Ideological and Political Teaching Task Management Platform based on Fuzzy Mathematics

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Abstract: In view of the immature phenomenon of current ideological and political teaching task management platform, this paper puts forward the design of the ideological and political teaching task management platform based on fuzzy mathematics. By adding user interface layer, it can provide information for users and can transfer users' operational data to data processing layer, so as to facilitate the users to find, log in and publish tasks, and the teaching task management platform database is established to achieve data storage, course information changes, teaching task changes and so on. The experimental comparison results show that the design of the ideological and political teaching task management platform is more convenient for tasks management and users operation, and has practical application significance.

Keywords: Ideological and political teaching; Task management platform; User interface layer; Database

1. Introduction

With the development of economy, the living standard of Chinese people has also improved. The government and people have paid more and more attention to the training of talents, and have paid more and more attention to the teaching quality of schools. Under the background of rapid development of computer technology and network technology, the teaching task management platform has become an important way of management. Because of the late start of schools' information construction, immature theoretical guidance, imperfect task management platform [1], and lack of unified planning, the development of teaching task management platform is hindered by the difficulty of sharing information among different departments, poor scalability and unfriendly user interface. Based on the existing problems, this paper designs the task management platform of ideological and political teaching by using the theory of fuzzy mathematics. The theory of fuzzy mathematics has the characteristics of reasonable structure and clear organization, which can solve complex and fuzzy problems. Its principle is to use the concept of membership degree of fuzzy mathematics [2] to quantify and solve different uncertain problems. The design of ideological and political teaching task management platform can effectively save school human resources, strengthen the management of teaching quality, improve the teaching quality, and play a very important role in the teaching task management.

2. Design of Ideological and Political Teaching Task Management Platform

2.1. Adding user interface layer

The user interface layer is an interface between users and the system. It is mainly composed of related data display and user interaction controls. It can provide information for users, and can transfer users' operation data to data processing layer to solve the fuzzy situation of users' data by using the theory of fuzzy mathematics. Adding user interface layer can realize user adding pages and the user interface can be used to delete the user function, modify the password [3], and retrieve the password. The above functions can be realized by sending hyperlinks to customers. The user interface layer of this design can automatically retain the property values of the controls between page switching and round trip. This design can facilitate the users' query, and at the same time, it can call the users' interactive operation on the server. According to the requirements of the ideological and political teaching task management platform, the user interface layer is set to four interfaces, namely, the user login interface, the user management interface, the task interface, and the login interface. The login interface and the management interface are mainly designed for the user login system. The task management interface is divided into task assignment and query interface, which is used for page switching and processing during task conversion.

The working process of the user interface layer is shown in the figure. In normal work, according to this process, the user can view my tasks through the user interface layer, view the ongoing tasks and completed tasks, and managers can view the completion situation and assign tasks, and exam tasks when they are completed. The user interface layer of the ideological and political teaching

task management platform can also realize the functions of file upload, editing and auditing. File upload refers to uploading newly issued files to the server [4]; file editing refers to that managers can add, modify or delete documents; file auditing refers to that school leaders audit uploaded files and give opinions online. After the approval of the audit, the completion signal is send.
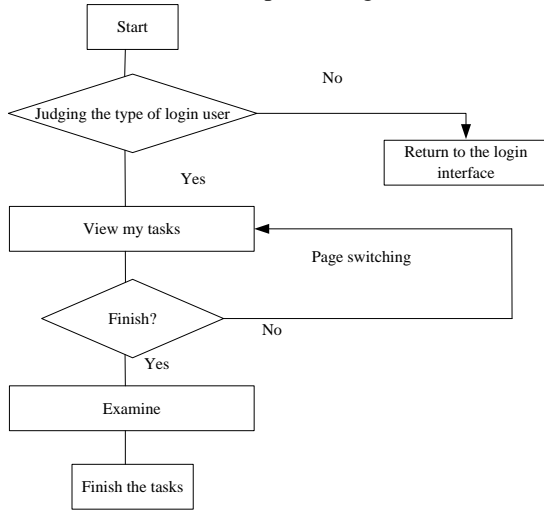

Figure 1. The working process of user interface layer

2.2. Establishing a teaching task management platform database

Through the analysis of the process of ideological and political teaching task management, we know that it mainly includes plan version, teaching content, teaching plan distribution, annual teaching objectives, course selection schedule, teaching task table and so on. The database of teaching task management platform is established by using the advantages of reasonable structure and clear organization of the theory of fuzzy mathematics, and the teaching task management of ideological and political teaching should be understood before it is established. Its main contents are shown as follows:
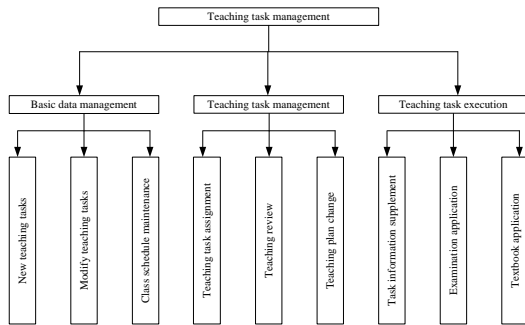

Figure 2. Teaching task management diagram

There are a lot of data in the teaching task management platform. When designing the database, we should follow the principle of starting from the actual situation, make full use of the software and hardware resources of the network platform, and meet the needs of the teaching task management platform to the greatest extent[5], so as to ensure the principle of practicability. Each table in the database should exist in the corresponding plan table to facilitate subsequent search, and different grades, majors, classes and so on should exist in different tables. The sequence number generator will be generated and store the maximum sequence number of the current object to facilitate search. Faced with a lot of data, we should establish a data maintenance subsystem, set up a system administrator. Different users have different permissions, the school leaders can query all the contents, students can query the class schedule, teachers can publish ideological and political course tasks through this subsystem. Each person has an independent account, and only the highest management level can modify it. In the database, users of every position have corresponding information storage[6] way. Teachers' basic information table is as shown in the table.

Table 1. Teachers' basic information

Field name	Type of data	Length	Description
Teacher ID	char	5	Uniquely identified teacher
Password	var	12	
Gender	vaar	20	Default value: female
Date of birth	char	12	
Type of users	var	8	05 means the type of teachers
Subordinate departments	vhat	10	

In the database, the storage format of teachers' basic information table is as shown in the table. The ordinary teachers have the functions of basic management, personal information and teaching tasks. Through basic management, the safe exit of the platform can be realized. The personal information refers to the modification of the personal password, and the teaching task refers to the teaching tasks assigned to individuals, which can supplement the teaching information and distribute teaching materials. Each administrator enters an account number and password when logging in, if they match with each other, the administrator can enter the system. If they do not match with each other, it will be prompted. In addition, students can view the detailed introduction of the ideological and political courses and have a simple and intuitive understanding of courses. Through the data maintenance subsystem, it can realize the changes of course information, teaching task and so on. At the same time, these data can be maintained. In order to facilitate the management of the ideological and political teaching task management platform, it is necessary to analyze these processes rationally.Using the theory of fuzzy

mathematics to establish the database is the basis of the design of the ideological and political teaching task management platform, which can increase the scalability of the database [7] and facilitate the management of teaching tasks.

Through the above design, the task management of ideological and political teaching is realized. In order to simplify the installation and operation of the platform for the users, to facilitate the expansion of the platform in the future, and to make the platform has good flexibility and security, the K/S model is adopted [8]. That is to say, users access the platform through browser, and all kinds of data are provided by server. This platform realizes the management of teaching tasks through user interface layer and teaching task management platform database.

3. Experimental Analysis

In order to ensure the effectiveness of the platform design, the simulation experiment is carried out, and in order to ensure the rigor of the experiment, the management platform is compared with the traditional platform, and the effect of the ideological and political teaching task management of a school is compared. More than 3000 teaching tasks in three semesters are put into task management platform and managed. The experimental comparison results are as follows:
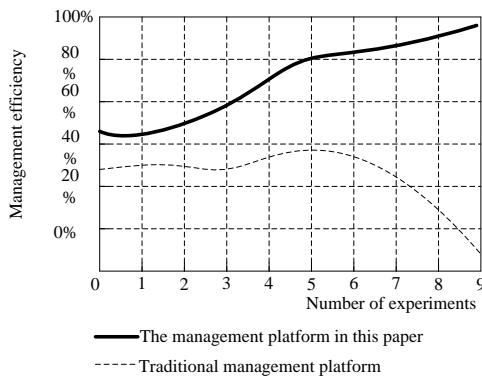

Figure 3. Experimental comparison chart

This experiment mainly compares the efficiency of the management platform. Through the figure, it can be seen that the management platform in this paper can effectively manage the ideological and political teaching task management, and with the increase of the number of experiments, the effective degree of management reaches more than 90%. In terms of management, the initial efficiency of the traditional management platform is OK, but with the increase of the number of experiments, it has a downward trend, indicating that the operation of the traditional management platform is not good in the face of these data.

The above experiments can basically show the effectiveness of the ideological and political teaching task management platform designed in this paper. The use efficiency shows that the platform greatly improves the management efficiency, achieves remarkable results in improving user interface and database establishment, and achieves teaching task management.

4. Conclusion

In view of the existing problems in the task management of ideological and political teaching in colleges and universities, this paper takes the task management of colleges and universities as an example to design the management platform. In the design of this platform, the users' needs are fully taken into account, user interface layer is added and database of teaching task management platform is established, which is convenient for users to use and has high efficiency and scalability, bringing convenience for platform upgrading and expanding in the future. Through the design of this platform, the interaction between school administrators and tasks is enhanced, the communication among users is facilitated, the task management is greatly facilitated, the efficiency of task management is improved, and it has strong practicability.

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