Design and Implementation of the Management System of University Faculty Team Construction in Internet Plus

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Abstract. Education is the foundation of a hundred-year plan. Teachers are the foundation of education. In order to further improve the comprehensive quality of teachers, improve the management of teachers' information, and deepen the implementation of the development goal of education informatization in the 14th Five-Year Plan, this paper constructs the management system of university faculty team construction under the environment of internet plus. The whole system takes Windows 10.0 as the standard operating system and C# as the programming language, and deploys the system contents in layers by virtue of the layered characteristics of ASP.NET MVC framework, so as to realize the reasonable operation of server-side functions. The detailed functions of the system will be designed according to the actual needs of teaching and administrative staff, thus promoting the further development of office digitalization in colleges and universities.

Keywords: university faculty team construction · information management · Web technology · MVC · SQL Server

1 Introduction

Teachers are the foundation of education. General secretary Xi pointed out in the National Education Conference: "We should persist in taking the construction of teachers as the basic work of university construction" [1]. The traditional management mode of teaching staff construction in colleges and universities has been difficult to meet the needs of colleges and universities, so colleges and universities urgently need to build a new management mode of teaching staff construction. However, at present, there are still two problems in the management mode of college teachers' team construction: First, the management mode of college teachers' team construction is outdated, which leads to the low efficiency of managers and the untimely update of teachers' information. Secondly, the function of the management system of college teachers' team construction is not perfect. At present, the function of the management system of college teachers' team construction is more inclined to the use of the management side, and the demand of teachers is ignored [2].

Based on the above problems, this paper combines the Internet information technology with the management mode of university faculty team construction, and constructs the management system of university faculty team construction in internet plus. The establishment of this system updates the management mode of faculty construction in colleges and universities, promotes the data circulation in the management system of colleges and universities, and ensures the authenticity and accuracy of faculty information.

2 Key Technologies

2.1 Web Technology

Web is an application architecture based on the Internet, and its core is to provide users with various forms of information content and information services. The development technology of Web application includes two parts: Web front-end development and Web back-end development. Through Web front-end development technology, man-machine interaction between users and the system can be realized, and the data information of the server can also be presented to users [3].

2.2 MVC

MVC is one of the programming modes in ASP.NET, and it is a special mode for creating Web applications. MVC can divide system components into three layers in detail, namely, view, model and controller layer. [4] The view layer is mainly responsible for page display and user data interaction. There are many technologies to realize page view, commonly used front-end technologies such as HTML, CSS and JS.

2.3 Development Process

According to the introduction of the above technologies, the configuration and deployment of the development process of the management system for the construction of university faculty team in internet plus environment are completed. In order to improve the overall function of this system, this paper adopts the related content of Web technology, with the help of Visual Studio 2019 as the bottom development tool, Windows 10.0 as the development foundation of operating system, and SQL server 2019 as the data storage tool to ensure the security of university faculty information storage.

In the whole development process of the system, a variety of development tools will be used. First, configure and install the above key software. After successful installation, select the Visual Studio 2019 tool and create a new File project in the file in the upper left corner [5]. Select ASP.NET Web in the application, configure its file attributes and storage path, click Next, select MVC mode in the pop-up window and name it. Then, with the help of the system function of VS platform, create a new Web site, add a template page, select the content place Holder server control, and add new entries in the control for detailed settings. [6] After that, the generated Website will be packaged and put into the web server, and the basic configuration of the system for the construction of university

```
//SQL commands for faculty member information entry
strSqL.Append(@teacher_id, @teacher_tno, @teacher_tname, @teacher_tbirch,
@teacher_taddr,@teacher._zzmm,@teacher tjointime";select @@IDENTITY");
SqIParameter[] parameters={
//Create the parameter object used by the teacher information};
//Assign values separately to the created parameter objects
object teacherObject = teacheDbSQL.GetSingle(strTeache (),parameters);
//Core code for the teacher's basic information display
//definition reader
```

Fig. 1. File management input code (original)

faculty team can be completed. Through the description of the above key technologies, the overall framework of university faculty construction management system is roughly planned, and the feasibility of the development and construction of university faculty construction management system in internet plus environment is clarified.

3   Functional Implementation

3.1   Information Management Module

In order to ensure the security and privacy of users, users need to log in before using specific functions. Users are divided into administrators and teachers. Under this module, the administrator can use the addteacher.aspx page to input the file information of the faculty into the database for centralized classification management, and the classification is based on the faculty and major to which the teacher belongs. The implementation code is shown in Fig. 1. When the personnel changes, the administrator can use the adjustment function of the system to update the files in the database. Under this module, teachers can check whether the personal file information is accurate with the help of the query function of the system. If the information is wrong, they can click the feedback button to send the error information to the administrator, which will be verified by the administrator before modification. [7].

3.2   Business Training Module

Under this module, administrators need to formulate teachers' business training programs according to national documents and school documents, and then publish the training information to the activity center for teachers and users to choose to participate. The detailed code is shown in Fig. 2. Teachers can register online according to the requirements of the documents. After the administrator reviews the teachers' registration materials, the system will notify qualified teachers to participate in the training activities by email [8]. For teachers who participate in training activities, it is necessary to upload learning reports after the training to ensure the basic significance of teacher training.

```
//Access·the·database·to·connect·to·teacher·training·information↵
SqlConnection·connLinking=new·SqlConnection(Profile·connection·string);↵
//Get·information·about·the·training·teachers↵
TeachearDataView=GetTrainingTeacherInfoToDataTableO);↵
//Information·about·the·teachers·participating·in·the·training·is·displayed·in·the·page↵
TeachearDataView.·DataSource='·TeachearDataView.Tables[0].·De·faultView;↵
TeachearDataView.·DataBind);↵
//The·selection·box·setting·is·selected·by·cycljudging·the·data·binding·control↵
for(int·i=0;i<TeachearDataView.Rows·count;i++)↵
//Gets·the·selection·status·of·the·check·box·in·the·data·binding·control↵
Checkbox↵
```

Fig. 2. Teacher training information management code (original)

3.3 Comprehensive Evaluation Module

The function of this module is mainly divided into two parts: teacher's morality assessment and performance assessment. The assessment of teacher's morality assessment is based on anonymous evaluation of students, mutual evaluation of teachers and evaluation of leaders [9]. Administrators need to use the calculation function of the system to generate the corresponding formula according to the assessment basis and calculate the scores, so as to obtain the final score to be included in the performance assessment. Details of performance appraisal are shown in Table 1.

When calculating the performance, the administrator first needs to obtain the assessment indicators submitted by teachers and users, and then calculate the corresponding indicators according to the weights, then make clear the indicators that teachers are responsible for, and calculate the indicators according to the weights. [10] That is, the performance score M = (index score Mi, overall index score Mj, time t) is calculated as shown in formula 1.

$$M = \sum_{i=1,j=1}^{n} \frac{M_i}{M_j T} \tag{1}$$

Table 1. Teacher performance assessment items(original)

Teacher performance appraisal and management class		
Operation content	Get Teacher's ethics value()	Get teacher ethics scores
	Set Connotation count Value()	Calculate the annual connotation assessment score value
	Set quality of teaching value()	Calculate the teaching quality score value
	CalcualtionValue()	Statistic the total score of teachers' performance appraisal

4   Conclusion

Teachers in colleges and universities provide the fundamental motivation for the cultivation of talents, and the management system of faculty is the core of improving teachers' comprehensive quality and professional level. This system makes use of web technology to transform the functions of the faculty management system in colleges and universities into network and digital, so that the system can simultaneously support the use of multiple departments and links in the school, integrate the resources in the school, improve the office efficiency of staff, and further promote the construction of a smart campus integrating teaching and office.

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