



Construction of Online Teaching System for Business Management Major in Higher Vocational Colleges Under the Background of “Internet Plus”

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Abstract. With the advantage of network technology, this paper builds an online teaching system for business management major in higher vocational colleges under the background of “internet+” to solve a series of problems existing in current business management major in higher vocational colleges, such as single teaching mode and separation of teaching from social needs. This system takes computer as development hardware and Windows 10.0 as development operating system. B/S architecture is used as the overall development framework of online teaching system, C# is used to write system language, Visual Studio 2019 is used as the bottom development tool for system construction, and aspx function page is set under the function module, so as to improve the detailed functions of online teaching system for business management major in higher vocational colleges.

Keywords: business management major · online teaching system · ASP.NET · B/S architecture

1 Introduction

With the changes of the times, world trade has gradually developed into an integrated pattern. In this environment of international trade exchange, China’s demand for business management professionals is also increasing. Influenced by its development factors, the business management major involves a lot of knowledge, and it is a complex and profound subject. The teaching mode of business management major in higher vocational colleges needs further exploration and reform. However, as far as the current development situation is concerned, there are still some problems to be solved urgently in the business management major of higher vocational education. Firstly, the teaching content of business management in higher vocational colleges is outdated, which leads to the scarcity of ways for students to learn and master information, and hinders the development of students. Secondly, the teaching mode of business management major is very single, which reduces students’ learning enthusiasm and easily leads to students’ “false knowledge” [1].

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X. Yuan et al. (Eds.): ICEKIM 2023, AHCS 13, pp. 1395–1399, 2023.

https://doi.org/10.2991/978-94-6463-172-2_150

Based on the above problems, this paper proposes to build an online teaching system for business management major in higher vocational colleges with the help of Internet information technology to solve the above problems. The online teaching system of business management major combines the dual advantages of online teaching and offline practice, and it is also the concentrated embodiment of the active use of modern educational technology in teaching practice.

2 Key Technologies

2.1 ASP.NET

ASP.NET is a kind of Web development platform, which provides an overall programming framework for the subsequent development of the platform, is the infrastructure used for development, and also provides various required services for web programs. ASP.Net can also realize caching, update the performance of some applications, and then cache frequently used pages of users and store them in temporary locations, which can retrieve these pages more quickly and give better feedback to users [2].

2.2 SQL Sever Database

SQL Server is a database management system. Using SQL Server 2019, database users can easily publish the required information and data to the Web, and users can view the data stored in SQL Server through common browsers, which saves query time and improves operation efficiency [3].

2.3 Development Process

According to the technical requirements of the above-mentioned related applications, the configuration and deployment of online teaching system development environment for business management major in higher vocational colleges can be completed. In order to improve the expansibility and portability of the system, the computer is used as the development hardware and Windows 10.0 is used as the development operating system. B/S architecture is adopted as the overall development framework of online teaching system, and the system language is written in C#. With the help of ASP.NET as the development platform, the two-way communication between browser and server is set by HTTP command to ensure the system operation. The specific implementation steps are as follows: First, open Visual Studio 2019 in the menu, select New Project in the file in the upper right corner, select ASP.NET web Application, and then click Next to preset the project properties before configuring the web form. Through the introduction of the above key technical theories, the overall framework process of system development is determined, and the feasibility of establishing online teaching system for business management major in higher vocational colleges is clarified.

3 Function Realization

3.1 Student Side

3.1.1 Autonomous Learning Module

When users access this system for the first time, they need to complete user registration according to the page instructions. This system divides users into two categories: teacher users and student users, and provides different services for different users. This system classifies all kinds of courses, and students can choose courses through their own learning interests on the homepage of the system. The course code is shown in Fig. 1. In the main page, the system will also recommend courses and intelligently arrange courses according to users' past browsing records, such as learning quantitative methods after learning about Economics, then learning Business English and Business Etiquette, then testing communication skills through the training system, and finally learning resource management to form a step-by-step learning route [4].

3.1.2 Training Communication Module

Click this module, students can browse the training activities released by teachers, and choose activities to participate according to their personal preferences, such as business English exchange lectures, business etiquette training classes, and resource management training. The system will regularly summarize the students' activity data and generate a chart, as shown in Fig. 2. Then the system will put the most popular training activities into the system recommendation homepage, and the recommendation page will be updated every week. In the process of practice, if you encounter problems, you can consult the teachers for solutions in time through the communication function. The online communication code of the system is shown in Fig. 3.

3.2 Teacher Side

3.2.1 Comprehensive Evaluation Module

The functions of teacher side are more inclined to the organization, supervision and guidance of practical activities. Teachers can make use of the real-time information and rich teaching materials provided by the platform to innovate the teaching content. Business management major is a comprehensive practice major that integrates three kinds of knowledge: business, communication and management. It is the main way to

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<video width="320" height="240" controls="controls">
  <source src="movie.mp4" type="video/mp4" /> //Video path
  <source src="movie.ogv" type="video/ogg" />
  <source src="movie.webm" type="video/webm" />
  <object data="movie.mp4" width="320" height="240">
    <embed src="movie.swf" width="320" height="240" />
  </object>
</video>
```

Fig. 1. Course viewing code (original)

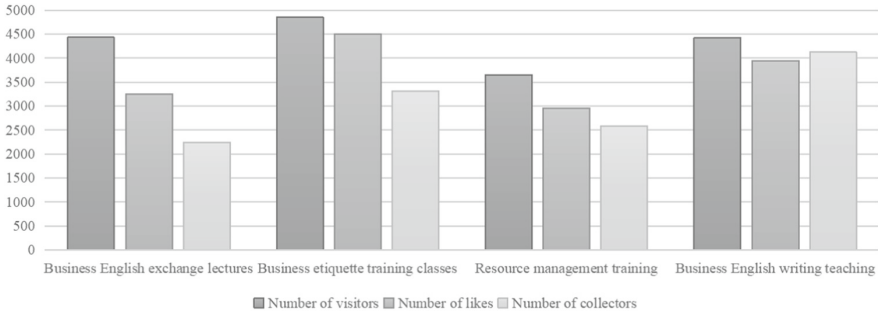


Fig. 2. Statistical figures of the activity data

```

</div>
<asp:UpdatePanel ID="UpdatePanel2" runat="server" UpdateMode="Conditional">
  <ContentTemplate>
    <asp:TextBox ID="TextBox2" runat="server" Height="105px" Width="485px"
      TextMode="MultiLine" BackColor="#CCFFFF" BorderColor="#FFFFCC"
    ></asp:TextBox>
    <br />
    <asp:Button ID="Button1" runat="server" onclick="Button1_Click2" Text="send"
      Width="90px" Height="24px" />
    <asp:Button ID="Button2" runat="server" Height="25px" Text=" chatting records">>"
      Width="99px" onclick="Button2_Click" />
    <asp:Label ID="Label5" runat="server" BackColor="#FFFFFFCC"
      ForeColor="#FF3300"
      Text=" Note: You can use return to send messages"></asp:Label>
    <br />
  </ContentTemplate>
</asp:UpdatePanel>

```

Fig. 3. Online communication code of the system

cultivate high-quality compound talents. Therefore, the system innovates the traditional single evaluation, and combines the process evaluation with the summative evaluation to form a multidimensional evaluation mode [5]. The students' comprehensive score Z is obtained by adding the usual scores and the final exam scores. The specific algorithm is as follows: the final exam score M accounts for 40% of the total score, and the usual score P accounts for 60% of the total score. It consists of three parts: study duration T , academic completion E and participation in training activities S . The detailed algorithm is shown in Formula 1.

$$\sum_i [(t + e + s) \times 60\%] + (m_i \times 40\%) = Z \tag{1}$$

4 Conclusions

The online teaching system of business management major in higher vocational colleges under the background of “internet plus” is constructed in this paper. This system integrates business management major into digital electronic technology, innovates traditional teaching methods, enriches teaching resources, cultivates students' practical

ability while imparting book knowledge, and makes students become comprehensive applied talents with excellent academic performance. In the follow-up research, we will further expand the extensibility and applicability of the system and find a more efficient talent training mode.

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