



Construction of Online Simulation Training System of E-commerce Based on Web

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Abstract. With the continuous development of Internet technology, the consumption patterns of Chinese people have also changed. As the backbone of promoting the development of online economy, e-commerce should pay more attention to cultivating the practical ability and innovative thinking of professionals. In view of the shortcomings in the current training mode of e-commerce professionals, this paper constructs an online simulation training system of e-commerce based on web to solve this problem. When developing JavaWeb applications, the system uses IDEA as the development and compilation tool and JDK 1.8 as the development environment. At the same time, CSS3+HTML5+Javascript is selected as the front-end development language, and Java is used as the back-end development language. On the system framework, vue.js is used in the front end, SSH framework of spring+springmvc+hibernate is used in the back end, and MySQL is used as the relational database of the system to store massive trade communication data, which helps the further development of intelligent teaching of e-commerce specialty. The platform adopts the qualitative and quantitative AHP to evaluate the teaching effectiveness, which provides a more perfect teaching guarantee for cultivating high-quality applied technical talents. The measured results of fuzzy comprehensive evaluation model show that the construction of online simulation training system can effectively improve students' professional ability and professional level, and promote their comprehensive development.

Keywords: e-commerce · Applied talents · Simulation training system · SSH framework

1 Introduction

E-commerce is a trade communication mode that realizes online trading with the help of Internet technology, which includes all consumption modes of online shopping, such as B2B, C2C and B2C. Online shopping has become the mainstream trend of national consumption at present, and the demand for e-commerce talents in society has also increased proportionally and the requirements have become stricter. As the training base of high-quality talents, colleges and universities should aim at the syllabus and be guided by social needs in the process of teaching implementation. In addition to the teaching of theoretical knowledge, we should pay more attention to cultivating students' practical

ability and innovative thinking, so that students can become comprehensive service-oriented talents that meet the needs of society. Under this background, this paper innovates the teaching mode of e-commerce specialty with the help of digital technology, and constructs an online simulation training system of e-commerce based on web. [1] In order to better fit students' study habits and further improve their practical ability and professional skills, the system correspondingly added different training courses for students to choose freely. The establishment of this system not only enriches the teaching content and training approaches while innovating the teaching mode, but also improves the comprehensive level of students, so that students can get more comprehensive development and grow into high-quality innovative technical talents that meet the needs of society [2].

2 Key Technology Introduction

2.1 SSH Framework

SSH framework is an integrated framework composed of Struts, Spring and Hibernate, and finally realizes MVC layered architecture. Among them, Struts is responsible for the separation of MVC, which uses JavaServlet and JSP technology to realize the process control of request processing, Hibernate is responsible for the handover with the database, and realizes the access to the database from the perspective of objects by encapsulating JDBC. Spring manages Struts and Hibernate, and its core is control inversion (IoC) and aspect-oriented (AOP). Spring's control inversion can play a decoupling role, so that Struts and Hibernate can be better combined and work in harmony.

2.2 Development Process

According to the requirements of system development and the use of the above-mentioned key technologies, the configuration and deployment of the development environment of e-commerce online simulation training system are completed. The overall development of the system is based on Windows10.0 operating system. Java is selected as the basic language for system development, JDK1.8 is selected as the development kit, Tomcat8.0 is selected as the Web server for system development, Eclipse is selected as the Java integrated development tool, and MySQL database is selected for data storage. Create a new Web project under Eclipse system and name it SSH. Click Finish to pop up a dialogue window. After the new project is completed, the home page of index.jsp will be automatically generated under the website directory. [3] Double-click the option under this page, change This is my JSP page. to the home page, and use Ctrl+S to save it. Then, click My Eclipse under Preferences in the window at the top of the menu bar to modify the coding in JSP. After modification, click OK to unify the encoding format and apply it. [4] Finally, the Struts framework is basically built. After completing the above steps, the system is simulated and tested, and the whole system is packaged and put into Tomcat server after it is correct, and it can be used normally after the IP address is set. Through the introduction of the above-mentioned key technologies and theories, the overall framework of the development of e-commerce online simulation training system is determined, and the feasibility of the establishment and operation of the system is clarified [5].

3 Functional Implementation

3.1 Student Side

When users access this system for the first time, they need to complete the user registration according to the page guidance. After logging in, subsequent operations can be started. The login code is shown in the following code:

```
//Judge whether to fill in the data, and determine the user name and password
if (strValIsNotNull(UserNuber) && strValIsNotNull>Password)) {
    var layerIndex = layer.load();// Open the loading layer
    $.post("/WCommerce/UserLogin",//Path: The controller name + the
method name in the controller{
    UserNuber: UserNuber,// user name
    Password: Password,//code
    rememberMe: rememberMe,//Remember the password
    }, function (msg) {
        layer.close(layerIndex);//Loading layer
        if (msg == "success") {
            //alert(" login successfully");
            //Jump to the main page
```

E-commerce major is a comprehensive practical course. In order to show the real trading environment and improve the training effect, the system integrates different training categories such as logistics, accounting and international trade to achieve a unified effect. In this system, students can choose roles to play according to their interests, such as producers, shopping malls, logistics, enterprises, foreign trade and sellers. [6] After completing a practical training, the roles can be exchanged in business, so as to ensure that students can gain different practical experience and cultivate their comprehensive practical ability. The system also has an information function to recommend corresponding real-time economic information for users according to the current trade hotspots, so as to enrich the knowledge reserves of student users. Among them, the recommendation of information involves the calculation of page views, and the calculation formula used here is shown in Formula 1. G_i stands for the popularity of information browsing, L_t stands for the amount of information browsing, I_i stands for the initial quality of video, K stands for the propagation speed of resources, T stands for the time, and finally the final result of G_i serves as the basis for information pushing. [7]

$$G_i = \sum_t \frac{L_t + I_i}{(t + 1)^k} \quad (1)$$

3.2 Teacher Side

In this system, the function of teachers is more inclined to organize, guide and supervise learning activities. Teachers can assign simulated roles to students who take part in

Table 1. Students' practical learning results

Target layer	Measures layer	Weighted value	Item score	Score
Practical training learning results score	The learning duration of the practical training courses	A1 = 0.0641	80	5.128
	Completion of the practical training tasks	A2 = 0.0472	86	4.0592
	Awards in the practical training competition	A3 = 0.0249	82	2.0418
...

practical training, and they can also arbitrate disputes arising from practical training and trade exchanges. With the monitoring function of the system, teachers can check the students' operation time and data browsing records in the background to avoid hanging up and learning. [8] Teachers can also publish real-time information in announcements, adjust the price and cost of commodities, the exchange rate of foreign currency, insurance payout ratio and other trade costs, and preset the probability of accidental events to enhance the authenticity of simulated training, so that students can give full play to their subjective initiative in the training process and cultivate their risk coping ability. After the training, teachers and users need to use diversified evaluation methods to comprehensively evaluate the training results of the learning subjects. Teachers and users can directly use the calculation formula of the platform to operate. [9] The platform uses AHP algorithm model to calculate the students' practical learning results, as shown in Table 1. The formula for calculating the weight value of the learning results is shown in Formula 2, where λ_{\max} represents the weight value, G represents the hierarchical level, and Q ranks the weight vector [10].

$$\lambda_{\max} = \sum_{i=1}^{n-1} \frac{(GQ)_i}{nQ_i} \quad (2)$$

4 Conclusion

In the context of the rise of network entrepreneurship, the development trend of digital electronic technology is extremely rapid, which leads to the separation of teaching theoretical knowledge in colleges and universities from the actual needs of society. In order to meet the actual needs of society and improve the practical ability and professional level of students majoring in e-commerce, this paper constructs an online simulation training system for e-commerce. The system combines theoretical knowledge teaching with practical ability training, and forms systematic teaching before, during and after class, which further promotes the comprehensive development of students and lays a knowledge foundation for cultivating high-quality applied e-commerce talents.

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