



Design of Teaching Resources Sharing System for Digital Film and Television Production Based on MOOC

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Abstract. In order to improve the utilization rate of teaching resources of digital film and television production specialty, this paper takes the sharing of teaching resources as the research object, and designs a set of teaching resources sharing system of digital film and television production based on MOOC by combining Internet technology and computer application technology. On the Windows platform, the system is written in C# language, and the ASP.NET framework is introduced to complete the three-tier structure, and a resource library with vivid teaching, complete types, rich contents and fast reading is built. Visual Studio is used as the development tool, IIS is used as the core server to ensure its stability, and SQL Server is used as the data support. This provides a resource sharing platform for the education and teaching of digital film and television production specialty in colleges and universities, integrates online and offline teaching resources, improves the actual efficiency of teaching work, and makes contributions to cultivating digital film and television production talents.

Keywords: MOOC · digital film and television production · teaching resources sharing · ASP.NET · computer application

1 Introduction

With the continuous development of network information technology and computer application technology, education informatization has been deepened, and the form of “Internet + education” has achieved good educational results. As a result, MOOC has risen globally and been adopted and applied by higher education, and the online + offline teaching mode has gradually become the mainstream trend of college education reform. The appearance of MOOC provides a new inspiration for the sharing of teaching resources: by digitizing offline resources and integrating existing network resources, multimedia resources with vivid teaching, complete types and rich contents are applied to teaching. Especially for the major of digital film and television production, a large number of video cases and materials are needed for teaching. For a long time, colleges and universities have their own camps, and even the resources of teachers in the same school are not interoperable, which has seriously affected the teaching effect and the utilization rate of teaching resources [1].

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Therefore, based on many years' teaching experience, the author of this paper designs a set of MOOC-based digital video production teaching resource sharing system, which enables all digital film and television production majors in colleges and universities to break through the space barrier and complete the teaching resource sharing system of joint construction, development and application.

2 Development Process

According to the introduction of the above-mentioned related technical contents, the configuration and deployment of the development environment of digital film and television production teaching resource sharing system are completed. The bottom development tool of this platform is Visual Studio 2019, and the operating system is based on Windows 10.0. Choose IIS 10.0 version in the aspect of web server to improve the operation ability of the server. Select SQL server 2019 as the data storage tool [2].

First, build the environment. ASP.NET needs to run in the .NET environment, and the construction of the .NET environment needs to be downloaded and installed in Microsoft official website. Enter the command: `dotnet new web app -o myweb app-no-https-fnet 6.0` to create the program [3]. After the program is created successfully, open the `Index.cshtml` file located in the Pages directory in any text editor, save and refresh it after code replacement, and then it can be created successfully. Official website downloads C# and installs it, configures the "name" variable, and then uses the foreach loop to traverse all the "names". SQL Server, too, is downloaded and installed in Microsoft official website. When the environment is ready, start creating the project [4].

The development tool uses Visual Studio 2019 to create a new project in the File part under the file, select ASP.NET Web in the application, and then preset the configuration properties and paths of the new project. Click Next, select MVC in the pop-up work window and name it, so as to create a ASP.NET MVC project for subsequent writing. Here, we will focus on the connection process between ASP.NET and SQL server. We will create a new ASP.NET empty website in Visual Studio, add a ListBox control, then split the control, select the data source SQL database, then "specify the ID for the database", select the data connection, select the "data table" we established, and select "fields, columns and * symbols represent all fields" in the data table. Finally, the account password is set for "test query", and the overall construction of the system can be completed after it is confirmed to be correct [5]. The test code is shown in Fig. 1. After the test, publish the generated website to IIS to complete the platform construction.

Through the description of the above key technologies, the overall framework is roughly planned, and the feasibility of establishing a digital video production teaching resource sharing system is clarified.

```

public class DB
{
    //Create a connection method
    public static SqlConnection sqlcon()
    {
        //This method of connecting to the database should change the way of logging in to
        the database to SQL Server authentication.
        //server="Server name";database="Name of the database that you want to connect
        to"
        //uid=" login name";pwd="password"
        return new SqlConnection("server=.\\mysql2008; database=login; uid=sa;
        pwd=xu760309");
    }
}

```

Fig. 1. SQL server Database Connection Test Code

3 Function Realization

3.1 Course Library

In the “course library”, teachers can upload online open classes related to digital film and television production, or upload their own classroom teaching records. Students can watch the course video online or download it offline [6]. The administrator is responsible for reviewing the videos uploaded by teachers, and approving or forbidding the uploading. Course support is ranked according to update time and popularity.

3.2 Paper Library

Both teachers and students can upload their own papers, and they can also retrieve others’ papers. The system does not provide paper download function, nor does it allow copying and screenshot. The implementation code is shown in Fig. 2. Through the establishment of digital film and television production professional discussion library, promote the professional construction and development [7].

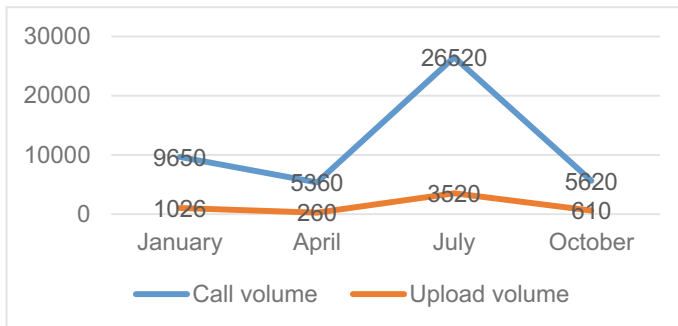


Fig. 2. Statistical diagram of the use of paper library

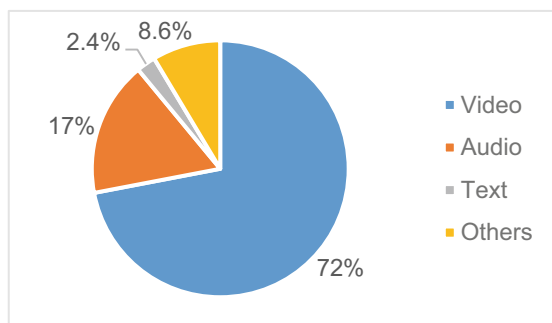


Fig. 3. Proportion of all kinds of resources in the works library

3.3 Works Library

The “works library” is divided into teaching plans, courseware and micro-courses, which are mainly uploaded by teachers. There are also creative scripts, photographic works and original videos, which are mainly uploaded by students. All users can preview and download online [8]. The system classifies according to video, audio, image, text and others, and makes statistical analysis of the current work library, and obtains the structure of the work library as shown in Fig. 3.

3.4 Test Question Library

The “test question library” is divided into multiple-choice questions, fill-in-the-blank questions and brief questions. The test questions are mainly uploaded by teachers, and the answers need to be set when uploading. Students can answer questions online, and the system can make preliminary marking. The scores of fill-in-the-blank questions and brief questions are calculated based on ALBERT and synonym word forest [9]. The calculation formula is shown in Formula 1.

$$\text{Score} = \begin{cases} [\alpha \times \text{TextSim} + (1 - \alpha) \times \text{KeySim}] \times \text{MaxScore}, & \text{TextSim} \geq \beta \\ \text{KeySim} \times \text{MaxScore}, & \text{TextSim} < \beta \end{cases} \quad (1)$$

Among them, TextSim is the text similarity obtained by ALBERT, with a value range of 0–1, KeySim is the keyword similarity calculated based on synonym word forest, with a value range of 0–1, and MaxScore is the score of the topic, where α and β are hyperparameters [10].

4 Conclusion

Digital film and television production teaching resource sharing system can encourage teachers and students to jointly build a resource think tank, promote academic exchanges, make use of network resources in colleges and universities, and at the same time make original resources of students and teachers better preserved, displayed and utilized. The system can effectively promote the teaching and learning of digital film and television

production specialty, promote professional construction and personnel training, and provide experience and ideas for other professional resources sharing. In the future exploration and research, we will continue to deepen the research on the sharing of digital film and television production teaching resources, so as to make better production and utilization of digital film and television resources, promote the curriculum construction of digital film and television production, and inject new vitality into the development of digital film and television production industry in China.

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