# The Design and Application of Computer Multimedia Art Teaching Resource Management System

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**Abstract.** The multimedia art teaching resource management system developed in this article selects the current more popular software operation mode as a framework, and uses the B/S mode to share the teaching resources. In addition, the desktop of the multimedia art teaching resource management system is mainly designed through Dreamweaver software, while the core technology to realize the art teaching resource system is SQL Server 2000 and ADO data technology. Through SQL Server 2000, the background database design of the art teaching resource system can be completed to ensure the safe storage and extraction of data, while the ADO technology needs to be combined with multimedia to ensure the smooth transmission of data in the art teaching resource system. The purpose of developing the multimedia art teaching resource management system is to realize the sharing of art resources and improve the quality and efficiency of art teaching. This paper proves the achievability of the multimedia art teaching resource management system through the design.

**Keywords:** Art Teaching Resource Management System · Computer · Multimedia · Database

## 1 Introduction

Art teaching resource management system mainly takes resource sharing as the main function, and in art resources, the most important thing is art courses and art courseware [3]. Art courseware resources can be used for teachers, which helps students to improve their learning efficiency, while art courses are the sum of online art courses and offline art courses [12]. According to the corresponding teaching plan and teaching objectives, the application of art teaching resource management system has greater advantages, which can realize independent learning across time and space, but also create a collaborative learning environment, and complete the global sharing of art resources [6]. After the installation and operation of the multimedia art teaching resource management system, the materials can be uploaded and downloaded, and the materials will be reviewed in the background, which ensures the security of the resources to a certain extent [5].

## 2 Design of Multimedia Fine Art Teaching Resource Management System

### 2.1 Architecture of Art Teaching Resources System

In the construction of multimedia art teaching resource management system, it must ensure that the system can remotely access to the network, and have a perfect information system structure, because only by meeting these requirements can the operation can be completed successfully, and the application can run stably [11]. Of course, in addition, the system must also ensure decentralized data management to avoid system failure due to the explosion of data [7] (Fig. 1).

### 2.2 Design of Multimedia Textbook Library

The data table of multimedia textbook database includes textbook type table, textbook form and authorized user form of textbook submission [8] (Tables 1, 2 and 3).
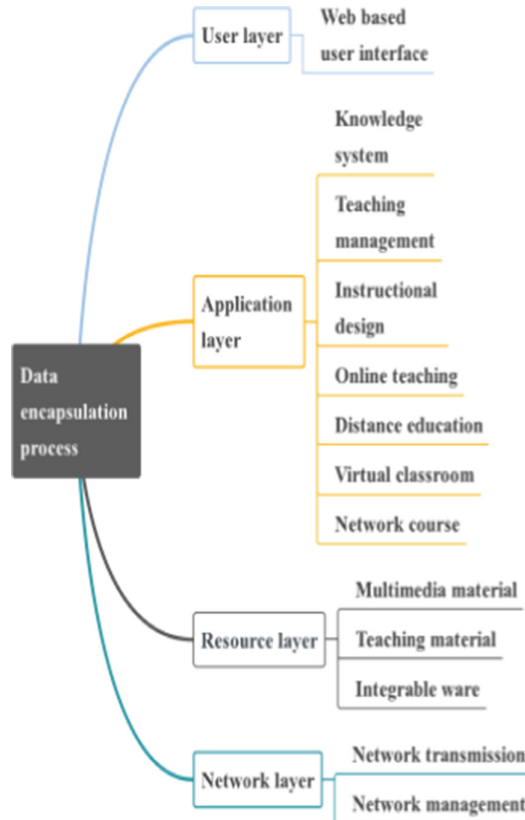


**Fig. 1.** Overall architecture of fine art teaching resource system

**Table 1.** Textbook Type Table

| Field name | Type | Length | Explain |
|---|---|---|---|
| Type number | Auto | | Primary key |
| Type name | VarChar | 30 | |

**Table 2.** Textbook Table

| Field name | Type | Length | Explain |
|---|---|---|---|
| Textbook number | Auto | | Primary key |
| Textbook name | VarChar | 30 | |
| Storage address | VarChar | 30 | |
| Textbook description | VarChar | 40 | |
| Audit status | VarChar | 15 | |
| Reviewer | VarChar | 8 | |
| Upload time | DateTime | | |
| Textbook type | VarChar | 12 | |

**Table 3.** Submit the authorized user form

| Field name | Type | Length | Explain |
|---|---|---|---|
| User name | VarChar | 15 | |
| User rights | VarChar | 15 | |
| Submission time | DateTime | | |
| Submission content | VarChar | 40 | |

## 3  Implementation of the Multimedia Fine Art Teaching Resource Management System

The client browsing program of the multimedia art information resource system based on Internet can realize user access to the system. Writing the program requires VBScript and JavaScript, and ADO (ActiveX Data Objects) for database access, based on ASP (Active Server Pages).

### 3.1  Features and Interrelationships of the Various Web Pages and Programs

Table 4 compares the characteristics and interrelationships of different web pages and programs in detail, and the relationship between them can be clearly seen from the table.

**Table 4.** For Web page relationships

| Name | Catalogue | Basic function |
| --- | --- | --- |
| Comm.VBC | Mmris | Cover. |
| Cover.htm | Mmris | Main boot program. |
| Default.ASP | Mmris | Resource information display. |
| DISPLAYMEDIA.ASP | Mmris | Displays an error message. |
| ERRORMESSAGE.HTM | Mmris | Comprehensive query server-side program. |
| GENERALOUERY.ASP | Mmris | Comprehensive query client program. |
| GENERALOUERVFACE.ASP | Mmris | Query and display resource list |
| GetMediaList.asp | Mmris | Query resource list server-side function. |
| GetmedialistFunction.inc | Mmris | Query and display the client part of the resource list. |
| GetmediaListHtml.inc | Mmris | Get the media subtype list. |
| GetMehialType.asp | Mmris | Global error handling. |
| GlobalErrorHandle.asp | Mmris | Information service page. |
| InformationService.htm | Mmris | Local error handling. |
| LocalErrorHandle.asp | Mmris | Information service page. |
| Mediatype.asp | Mmris | Local error handling. |
| ModifyUserInf.asp | Mmris | Initialization of media type tree and its management. |
| ModifyUserInfFace.asp | Mmris | Modify user account information. |
| Nothing.htm | Mmris | Modify user account information interface. |
| Readmediatype.INC | Mmris | Empty page. |
| Selectmedia.asp | Mmris | Public program for reading media. |
| Tools.htm UserLogin.asp | Mmris | Initialize the media type and transform the client media type. |
| UserLogin.htm | Mmris | User login service user login interface tree sample document |
| TreeView.css | Mmris | Quasi encapsulated treeview program. |

## 3.2   Establishment of the Database Connection

In order to improve the operation efficiency of the art resource management system while being throttled, it is necessary to customize the specialized data to access the public file, through which users can quickly find the location of the required data. In order to simplify the operation again, ODBC (Open Database Connectivity) is not configured in the art resource management system database, but replaces ODBC with code. Because this ensures that the user only needs to call the data window to achieve access to the database [11].

In practice, changing the user password or changing the name of the database can be done through dynamic configuration technology, without having to pass the Web page (2020).

### 3.3   Implementation of the Teaching Resource List

- Art resources upload
  The establishment of the multimedia art resource management system is to serve teachers and students, and to facilitate teachers and students to have access to art resources. To this end, it is necessary to establish an art library, and users can upload their works to the art library, conducive to the browsing of teachers and students [13]. However, when uploading the works to the database, we also need to set the attributes of the works, and classify the works through the database function, so that the works can be easily retrieved. Considering the further division of the work, it is necessary to classify the work according to its subject matter, or according to the key words set by the author [4].

  After the work is uploaded, the administrator will review it, re-classify the mis-classified works, and delete some works of poor quality to ensure the average quality of the works in the art library. In addition, the administrator can also grade the works according to the quality of the works, and classify the high-quality works into the essence area, so that users can selectively view the works, but also convenient for users to quickly browse the works [2].

- List of Fine Arts teaching resources
  Data binding refers to the data source bound to the user interface, and the purpose of binding the data source is to develop the environmental system by using ASP to realize the material list function of teaching resources [15]. The list of materials of teaching resources is also the list of art teaching resources. On the list of resources of art teaching, users can see a variety of multimedia textbooks, and choose the required textbooks to download or watch. If the user chooses to watch online, the system will automatically enter the teaching resource module, presenting the teaching resources in front of the user in various forms [1].

## 4   Conclusions

In a word, the multimedia art teaching resource management system is composed of the management system and the multimedia production system. Through these two systems, the acquisition and upload of the teaching resources, or production and storage, can be realized. The multimedia art resource system includes the textbook library and the material library. Taking the textbook library as an example, it can save all kinds of multimedia textbook information, and ensure the security of the data when uploading or downloading the multimedia textbook data. The Web page of the program is realized through ASP dynamic technology, through which the material in the system client program is effectively read and browsed.

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