

# Development of the Management and Service System of the Occupation Education Grouping

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## Abstract

**Vocational education grouping has become the norm of Higher Vocational education, but the modern management and service means are still insufficient. This paper realize management and service system of the work of vocational education grouping which uses SSM technology and Oracle database , and completes eight modules with different users at four levels. A solid foundation was made to information exchange, major build, resource sharing and so on.**

## Keywords

**Occupation Education; SSM; Information Sharing.**

## 1. INTRODUCTION

Vocational education is the cradle of cultivating "skilled talents". Vocational education group is an educational organization with the main contents of cultivating talents, building teaching staff, building practical training platform, member developing and innovating together, and promoting international strategy. Vocational colleges and industrial enterprises are the main bodies in the vocational education that the aim is to cultivate talents needed by enterprises. Vocational education group is developing vigorously, but it also causes the problems of management coordination and synchronization of collectivized school-running, such as enterprise within the group, sharing of school resources, docking of big data, maintenance of organizational structure, coordination of funds management and so on. Therefore, the construction of collectivized work management system is appropriate. As a matter of urgency, we can achieve resource sharing, mutual benefit, mutual promotion and overall upgrading through information sharing platform.

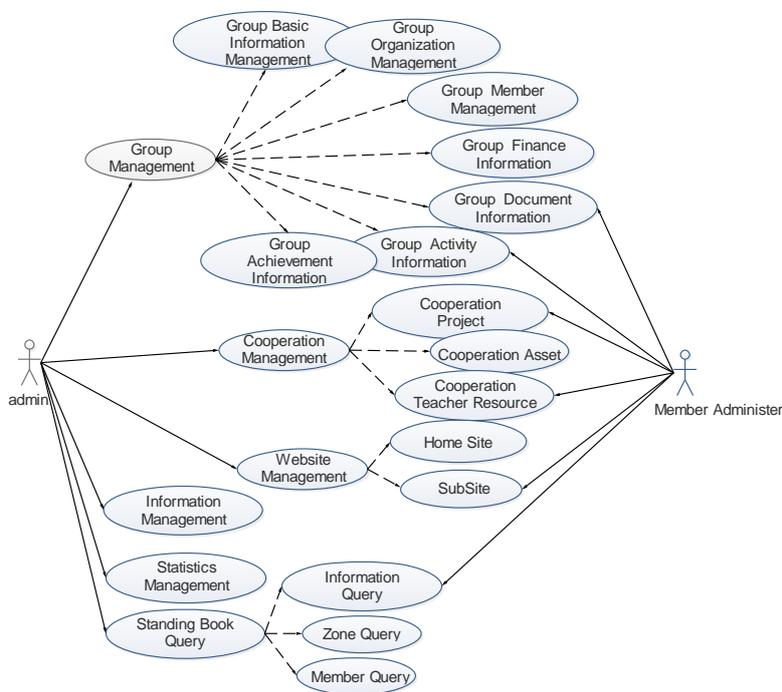
## 2. DEMAND ANALYSIS OF THE MANAGEMENT AND SERVICE SYSTEM OF OCCUPATION EDUCATION

The work management and service system of Vocational Education Group comprehensively considers all aspects of the needs of its members, including industries, enterprises and higher vocational colleges [1]. It uses the platform advanced information technology to build ways of communication between universities and enterprises, to enhance the rapid dissemination of information, the deep integration of schools and enterprises, and the running of vocational education group level[2][3].

### 2.1. Functional Demanding Analysis

The system divides users into four categories, one with the highest authority is the system administrator of the leading institutions, the other is the system administrator of the member units, the third is the contact person in charge of the cooperative development of each school

and enterprise, and the fourth is the ordinary visitor, who investigates and analyses the needs of users, and manages the administrators and member units of the leading institutions [4]. The administrator user completed the design of the use case diagram as shown in the figure 1.



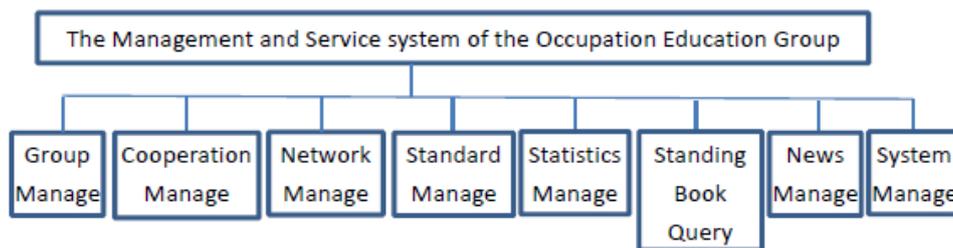
**Fig 1.** User Case Figure of the Occupation Education Management and Service System

## 2.2. Demand Analysis of Running Environment

The operation environment of the management and service system of the vocational education group includes hardware requirement, network requirement and other security requirement [5][6]. Hardware requirements are two professional servers for system architecture, including application servers and database servers. The network requirement is to meet the platform's opening to the Internet, with enough bandwidth to ensure the normal access of the platform. The security requirement is that the platform should have the ability to backup and restore data. It requires database backup every day. If there is a problem, it can only lose data for one day at most. The stability requirement is that the availability of the platform must reach 99.9%, which ensures that the system can roll back to the last backup point in time after problems occur [7].

## 3. DESIGN OF THE MANAGEMENT AND SERVICE SYSTEM OF OCCUPATION EDUCATION GROUPING

The goal of designing system has four points. First, it can enhance the ability of the members of the secretariat service group in the grouping by means of information technology. Second, it can strengthen the construction of close vocational education group. Third, it can realize the standardization and information technology management of the work of the group. Fourth, it can improve the comprehensive service ability of the occupation education group. The group's "Management center", "Data center", "Resource center" and "Information center" are built gradually base on a good foundation for the long-term development of vocational education group. The user needs of the system are analyzed and the business function modules of the system are designed as shown in Figure 2.



**Fig 2.** Function Module of System

(1) Group Management: This module completes group basic information management, group organizational structure management, group member unit management, group funds management, document management, group system management, group activities management, group research results management.

(2) Cooperative Management: This module completes management of joint construction resources, cooperative project, teachers' bank and modern apprenticeship.

(3) Website Management: This module completes column management and basic information management of website.

(4) Standard Management: This module is pleased with Jiangsu province's talent training and school-enterprise cooperation index database, completing data submission.

(5) Statistical Management: This module is used to make a chart and other presentation methods that complete the summary and statistics of enterprise information, cooperative projects, number of cooperative students, mixed teaching staff and other data in the group to provide a basis for leadership decision-making.

(6) Account management: This module is simple accounting for the cost input of vocational education group enterprises and schools.

(7) Message Management: This module is message transmission between schools and enterprises, the function of increasing, circulating and deleting messages.

(8) System Management: This is complete the role assignment, authority assignment and personal information improvement of administrators at all levels of the website.

## 4. REALIZATION OF OCCUPATION EDUCATION MANAGEMENT AND SERVICE SYSTEM

### 4.1.SSM Processing Flow

The system is implemented by SSM (Spring + Spring MVC + MyBatis) technology. SSM technology is a standard MVC mode. Spring MVC is an important component of Spring framework and a lightweight Web application development framework. The core idea is to control inversion and face-to-face programming. Web development is divided into three layers that include model layer, view layer and control layer through front-end controller, application and context. Spring MVC is used to transfer requests and manage views. Spring implements business object management. Mybatis is used as the persistence engine of data objects. Spring MVC represents model, View and controller receiving external requests for distribution and processing. Its processing mechanism is shown in Figure 3. The user sends the request to the front-end controller dispatcher servlet; the controller receives the request and processes it, finally uses view to render the view and respond to the user. The control layer is composed of Spring MVC's entry dispatcher servlet and business controller, which handles user interaction. The model layer is composed of business logic layer and data access layer, which handles business logic. The data access layer is implemented by MyBatis framework. The view layer is



## 5. CONCLUSION

Vocational education needs the deep integration of schools and enterprises, the two-way barrier-free understanding of the needs of each other, schools understand the employment of enterprises, enterprises participate in school education, but the rise of Vocational Education Group also highlights the inadequacy of information management means, the system uses SSM technology to achieve vocational education group work management and service system. It satisfies the basic needs of vocational education group, completes the sharing of resources and information between schools and enterprises, makes education more three-dimensional, and talent training will insert the wings of soaring.

## ACKNOWLEDGEMENTS

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