

# Reform of Virtual Simulation Experiment Teaching Mode of Economic Management under the Background of Application-Oriented Transformation

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**Keywords:** Virtual simulation, Experiment teaching, Economic management, Application-oriented transformation

**Abstract:** Application-oriented universities focus on cultivating applied, technical and compound talents, and must keep pace with the development of local economy and society. Therefore, it is particularly urgent to carry out virtual simulation experiment teaching. Simulation is to virtualize things in the real world and reproduce things in the real world in an Abstractway. In order to meet the needs of national development and create a good financial environment for enterprises, a virtual simulation experiment of economic management was set up. By sorting out and processing financial data, the teaching process can simulate the financial process of enterprises in an all-round way. Through the division of posts, students participate in the whole process of interaction and enhance the depth and breadth of students' understanding of what they have learned. Under the background of application-oriented transformation, how to improve students' practical ability plays a key role in the cultivation of university talents. Based on the actual situation of the courses of economics and management specialty under the background of application-oriented transformation, this paper puts forward the idea of reforming the virtual simulation experiment teaching mode of economic management under the background of application-oriented transformation.

## 1. Introduction

In recent years, virtual simulation experiments are gradually being introduced into the major of economics and management, mainly to simulate the real business environment, so that students can experience the process of business decision-making in the laboratory and achieve the effect of simulating business operation[1-2]. Under the background of application-oriented transformation, the construction of virtual simulation experimental teaching platform for management specialty not only conforms to the trend of educational informatization, but also conforms to the practical needs, which has a positive effect on improving the teaching quality of colleges and universities and deepening the reform of experimental teaching.

## 2. The Present Situation of Economic Management Teaching under the Background of Application-Oriented Transformation

### 2.1 Single Teaching Method

The teaching reform of economic management has been going on all the time, but the effect is not obvious. The teaching methods are generally simple, and traditional teaching is the main method, supplemented by case teaching. The progress of big data teaching is slow, which can not meet the needs of digital intelligence financial development[3-4]. Classroom teaching is mainly in the form of teachers telling students to listen. Although the efficiency of this teaching method is relatively high, it is difficult to adapt to the characteristics of financial management, and it is impossible to integrate theory with practice. From theory to theory, from textbook to textbook, students' participation is not high, and it is difficult to stimulate learning motivation and interest.

## 2.2 Teachers and Students Have Cognitive Bias Towards Virtual Simulation Experiment

The goal of talent training in application-oriented undergraduate universities is to cultivate applied and innovative talents, and then serve the regional economic development. The construction and implementation of practical teaching system in application-oriented undergraduate universities is very important for the cultivation of applied talents[5]. Some teachers' experimental teaching concepts are relatively old, and they blindly emphasize the experimental teaching in real environment, unable to keep pace with the times, and have a one-sided understanding of virtual simulation experimental teaching. Many teachers seldom take the initiative to contact the cutting-edge information technology, lack understanding of virtual simulation experiment teaching, do not actively explore virtual simulation experiment resources, and can not use them flexibly.

## 2.3 Virtual Simulation Practice Teaching Equipment is Relatively Backward

The times are changing all the time, so higher education, which is closest to the society in education level, must adjust and update educational ideas and educational methods, methods and means in time with the development of society. The investment in teaching equipment is limited, so we can only continue to train students by relying on the experimental practice equipment that lags behind the same institutions. However, it is difficult for the students trained in this situation to directly connect with the advanced equipment and facilities system of enterprises or institutions, especially multinational global enterprises, in the process of leaving campus and entering the society, resulting in the lack of adaptability of newly employed students and low evaluation of enterprises, which will also affect the employment situation of students in the next year and lead to a vicious circle[6].

## 3. Thoughts on the Construction of Virtual Simulation Experimental Teaching Platform for Economic Management

### 3.1 Cluster Virtual Simulation Experimental Platform

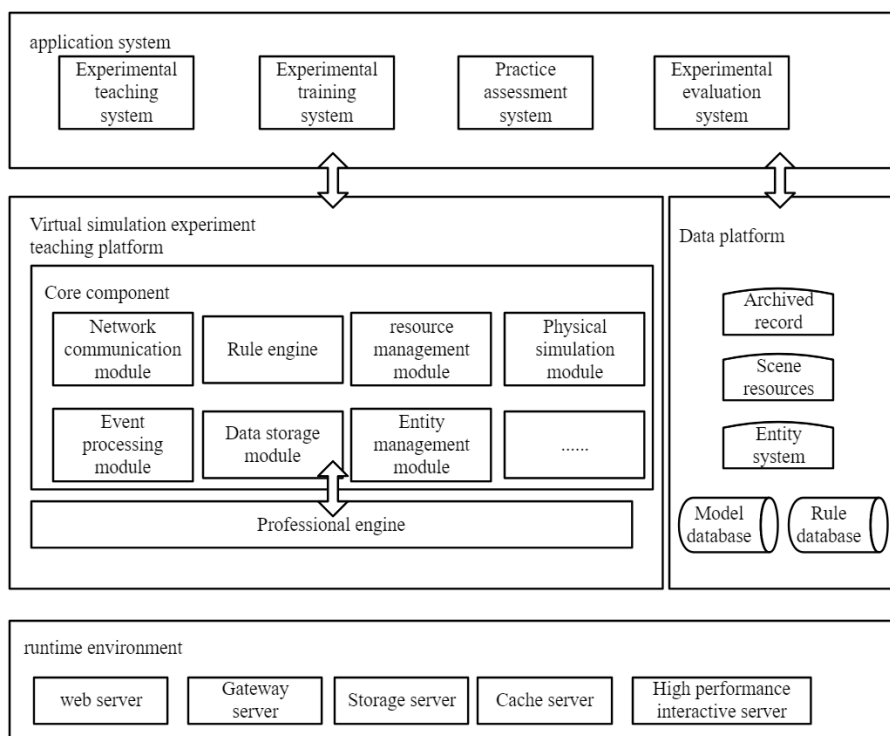


Fig.1 Virtual Simulation Experimental Teaching Platform for Economic Management Specialty Cluster

The construction of virtual simulation experimental platform for professional clusters is based on the reform idea of professional cluster construction, with the training goal of “applied technology”

as the core and the industry and industry as the background of applied transformation, actively promoting the integration of production and education and school-enterprise cooperation, and constructing a professional cluster experimental teaching platform with three experimental levels: basic experiment, professional experiment and professional comprehensive experiment with each virtual simulation experimental module as the main content[7]. As shown in Figure 1.

According to the ideas of “taking reality as virtual” and “taking reality as the foundation”, there are great differences between different disciplines. How to integrate modern information technology such as artificial intelligence, computer simulation technology and network technology into practice and continuously expand the breadth and depth of experimental teaching is an important way to improve the quality and effect of experimental teaching.

The design, construction and implementation of multi-level virtual simulation practice teaching system need the joint participation of multi-subjects, and it is necessary to constantly explore the multi-party collaborative model involving school-enterprise cooperation units, schools, teachers, students and the public[8-9].

### **3.2 Organization of Virtual Simulation Experiment of Economic Management**

Because the virtual simulation practice of economic management is an extremely complicated process, it is necessary to form a complete team of teachers to complete the specific experimental guidance work through division of labor and cooperation, so as to meet the teaching requirements of comprehensive simulation practice across disciplines. Experimental technicians must be included in the steering group. Laboratory technicians should be responsible for maintaining the daily operation of the platform, assisting teachers to organize and carry out teaching activities, so as to provide strong technical support for the smooth implementation of virtual simulation practice teaching.

In the original experimental system, experimental teaching resources include laboratories, experimental projects, experimental teaching materials, experimental equipment, instructors, experimental technicians and so on; Schools should establish a shared resource service system for experimental projects in the field of economic management, based on a remote teaching environment and combined with the professional experimental characteristics of economic management, to improve and optimize experimental teaching resources [10]. Integrating network information technology with classroom teaching organically, taking manufacturing as the main body, the business environment, government environment and public service environment are virtualized, and the whole process of production and operation activities are simulated, so that students can obtain actual combat effects similar to real social and economic activities on this virtual simulation platform of social and economic activities.

## **4. Reform of Virtual Simulation Experiment Teaching Mode of Economic Management under the Background of Application-Oriented Transformation**

### **4.1 Change Teaching Methods**

The establishment of virtual simulation experiment teaching of economic management is to respond to the call of the country and create the financial environment of enterprises. By sorting out and processing financial data, the teaching process can simulate the financial process of enterprises in an all-round way. Through the division of posts, students participate in the whole process of interaction and enhance the depth and breadth of students' understanding of what they have learned.

According to the demand of enterprise financial posts, we divide the posts, completely simulate the actual financial situation of enterprises, and create the financial environment of enterprises. After the financial data are processed, the virtual simulation financial teaching is transferred to classroom teaching, and the theoretical teaching and practical operation are carried out at the same time, and the theory and practice are integrated; It is necessary to change the traditional teaching method of teacher-centered and indoctrination into a teaching method of student-centered and teacher-assisted, which can promote students' autonomous learning. Through advanced teaching concepts, scene reappearance, and repeated learning, the understanding of knowledge is enhanced.

Through continuous practice, the quantitative change of students' comprehensive ability is achieved, and the comprehensive ability is promoted through the improvement of hands-on ability.

#### **4.2 Strengthen the Iterative Development of Virtual Simulation Practice Teaching Project**

The traditional computer task processing mode takes the desktop as the core, but cloud computing transforms it into the network as the core, and uses the computing system distributed in the Internet to support various applications. Cloud computing and cloud platform can be used to build the technical environment of “experimental teaching of economics and management in internet plus” and provide technical convenience for building a simulated virtual business society. In this process, students can understand the work they should complete and their position in the enterprise workflow, understand the processing procedures of various businesses and the relationship between posts, businesses and units, so as to understand the overall situation of the enterprise and enhance their business capabilities.

Simulation is the virtualization of real things, and it is the development process of abstractly reproducing real things through models, such as simply and abstractly reproducing the workflow and tasks of a certain post or a certain specialty in an enterprise. Because of the high construction cost, long development cycle and large maintenance investment, virtual simulation practice teaching project is currently a weak link in the construction of practice teaching curriculum system of various majors. Therefore, in order to ensure the construction and implementation of multi-level virtual simulation practice teaching, all majors should start with the employment needs of enterprises and industries, closely cooperate with enterprises, and effectively develop key tasks that do not have practical conditions into teaching projects by using virtual simulation technology, and continue to iterate and upgrade during the implementation of teaching projects.

#### **4.3 Strengthen the Introduction and Cultivation of Virtual Simulation Practice Teaching Talents of Economics and Management**

In universities that implement the training system of virtual simulation practice economic management education, it is necessary to strengthen the training of corresponding talents, let the talents of virtual simulation practice economic management education enter universities, and attract them to coastal and other economically developed provinces and regions. At the same time, for universities whose talent introduction quota and treatment are not perfect, we should focus on the cultivation of internal practical teaching talents and send them to universities, enterprises or institutions with excellent practical teaching results for regular training and further study. After returning to China, we should give them treatment and salary adjustment, and relax or take care of the promotion channels appropriately, so as to enhance the internal enthusiasm of virtual simulation practice teaching of school management.

#### **4.4 Optimizing the Assessment of Virtual Simulation Experiment Teaching of Economic Management**

According to different experimental courses and projects, various assessment methods such as experimental operation, experimental report and subject defense are flexibly adopted. Finally, make full use of online means for assessment, including students' attendance, homework scoring, etc., and even the final results of some experimental projects can be evaluated by the system itself. This evaluation mode is objective and fair, and can also reduce the workload of experimental teachers. A new mechanism of practical teaching of economics and management, which combines “learning”, “research” and “production”, and a new mechanism of subject competition are formed, solves the problems of disjointed teaching in and out of class and insufficient practical ability, and provides an effective carrier and guarantee mechanism for students' practical ability training.

### **5. Conclusions**

Although the teaching reform of economic management has been carried out for a long time, the effect is not remarkable. On the whole, the teaching method of economic management is relatively

simple, and traditional teaching is the main method, supplemented by case teaching. The development speed of big data teaching is very slow, which can not meet the needs of digital intelligent financial development. Under the background of application-oriented transformation, because the virtual simulation practice of economic management is a very complicated work, it is necessary to establish a sound team of teachers and conduct specific experimental guidance accordingly to meet the teaching needs of comprehensive simulation practice across disciplines. Taking students as the main body of teaching, we should strengthen practical teaching, expand the depth and breadth of school-enterprise cooperation, establish modern off-campus and on-campus training bases, establish a scientific curriculum system, improve teaching quality and realize the goal of talent training.

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