ISSN: 2688-9323

Research on Construction of Resource Sharing System for Experimental Teaching of Economics and Management

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Abstract

In the reform of economic and management experimental teaching, the sharing of experimental teaching resources can maximize the role of material resources, financial resources, intelligence and human resources. Through thinking about the bottleneck existing in sharing the experimental teaching resources of economics and management, four principles of "sustainability, scientificity, efficiency and professionalism" are adhered to. The government's top-level design, enterprises' support, experimental teaching demonstration center and cooperation between universities are the main construction subjects. Cloud computing technology is used to build a resource sharing system platform, and a resource sharing system model of economic and management experimental teaching is constructed. It also analyzes the influencing factors of the operation of the economic and management resource sharing system, realizes the sustainable development of the resource sharing system, and provides a new idea for solving the sharing obstacle.

Keywords

Economic Management; Experimental Teaching Resources; Resource Sharing System; Cloud Computing Technology.

1. Introduction

Experimental teaching resources of economic management are the foundation and carrier of teaching and scientific research in financial and economic colleges and universities. Openness and sharing provide personalized and diversified choices for teachers and students to learn, so that students can enjoy the limited experimental teaching resources of economics and management of the school and access to more and better education resources, as will as improve the quality of innovation talent in general. At the same time, in the reform of economic management experimental teaching, the sharing of experimental teaching resources can maximize the utilization of teaching resources, improve the flexibility of experimental teaching resource management mode and the utilization of resources [1], and constantly improve the overall characteristic experimental teaching level. In addition, the complementary advantages of experimental teaching resources in colleges and universities are conducive to eliminating regional differences, cultivating more high-quality students, and promoting the overall progress and rapid development of society. Not only produce economic benefits, but also create social benefits. However, there are still some bottlenecks restricting the sharing of experimental teaching resources of economics and management in universities. In order to break the bottleneck, this paper constructs the sharing system of experimental resources of economics and management, in order to realize the effective sharing of experimental teaching resources of economics and management.

ISSN: 2688-9323

2. Bottleneck of Sharing

2.1. Asymmetric Resource Sharing Information

In recent years, China has vigorously promoted the construction of experimental teaching of economics and management, and many unique experimental teaching resources of economics and management have been formed in relevant colleges and universities. However, the development of resource sharing has been hindered by problems such as weak awareness of sharing and poor information sharing channels between supply and demand. Although some universities have a great advantage in the experimental teaching resources of economics and management, they are often reluctant to open their resources in order to maintain their unique advantageous position. Therefore, the unique and rich teaching resources of the experimental teaching resources of economics and management are left idle and wasted. Resource demanders cannot obtain the corresponding teaching resource information timely and accurately, leading to the inability to know where the resources are available, and it is difficult for the supply and demand parties to realize the real complementary advantages and benefit sharing.

2.2. The Subject of Construction is Unclear

The resource sharing of the experimental teaching of economics and management in colleges and universities is not a simple resource integration, which involves various organizations. The construction and management of resource sharing platform requires a large amount of people, money and materials [2]. And there are problems such as how to divide responsibilities and rights and how to share construction risks. If there is no unified intermediary organization among sharing subjects to manage, coordinate, unified planning and layout, it will be extremely difficult to realize the sharing of experimental teaching resources. Who should take the lead, whether it should be promoted by the government, organized by universities or undertaken by third-party enterprises for commercial purposes, and how to carry out the construction of resource sharing have not been solved, so it is difficult to achieve a wider range of sharing.

2.3. Lack of Rules and Regulations Guarantee

In the process of experimental teaching resources from resource providers to resource demanders, when the needs of multiple users cannot be satisfied, conflicts of interest and destructive behaviors will inevitably occur. In order to promote the rapid, orderly, economic and reasonable sharing of resources, and establish a good channel of resource communication between the demander and the supplier, there must be relevant rules, procedures or agreements. However, in the current practice of sharing experimental teaching resources, there is no relatively perfect rules and regulations planning in terms of the content, scope, rights and obligations of sharing parties, and fee standard of sharing resources, so management is quite difficult[3]. The comprehensiveness and rationality of legislation expressed by rules and regulations will directly affect the development of resource sharing.

2.4. Limited Scope and Low Level of Resource Sharing

Resource sharing can be divided into intra-university sharing, inter-university regional sharing, provincial sharing, domestic sharing and international sharing. At present, most colleges and universities use a single local area network to make experimental teaching resources. Due to the great difference in management systems, the distance between schools, the unsmooth information channels and the high cost of coordination, the phenomenon of "information island" is obvious. Therefore, the sharing of experimental teaching resources between schools is difficult to achieve.

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2.5. Limited Internet Technical Support

To realize the cross-regional sharing of experimental teaching resources of economics and management, it is necessary to realize the collection, processing, storage, calculation, release and data processing of experimental teaching resources information. In practice, colleges and universities have their own technical support platforms for the sharing network of experimental teaching resources of economics and management, but because they are independent and cannot be shared with other systems, they can only meet the sharing needs of specific fields. Therefore, flexible, efficient and orderly sharing management is restricted.

3. The Construction of Resource Sharing System

3.1. Resource Sharing System Theory

The word system comes from ancient Greece, meaning the parts constitute the whole. Its core content is: the system is an organic whole with certain functions formed by several elements in certain structural form. Through various coordination mechanisms, the resource sharing system achieves the systematization of resource sharing management and the "win-win" of all participants. Therefore, this study regards the resource sharing process of economic and management experimental teaching as a dynamic system engineering, studies the bottleneck of resource sharing of economic and management experimental teaching from a new perspective, and provides new ideas for solving the sharing obstacle.

3.2. Construction Principles

According to the guidance of resource-sharing system theory, the construction of resource-sharing system for experimental teaching of economics and management should adhere to the four principles of "sustainability, scientificity, efficiency and professionalism". These four principles are the basis of action and enable us to understand the essence and core issues of resource-sharing system from a dynamic and holistic perspective.

3.3. Subject of Construction

The construction of the sharing platform of experimental teaching resources of economics and management is a huge systematic project. In order to implement the sharing of experimental teaching resources of economics and management, the government, enterprises, national demonstration centers and universities are the main construction bodies to jointly realize the sharing construction of resources.

3.3.1. Top-level Design of Government

The construction of sharing system involves the integration of multiple resources. In order to actively promote the construction of sharing platform, it is better for relevant government departments to undertake the task of top-level design and layout, coordinate resources and relations of all parties, and provide financial guarantee. Secondly, the Ministry of Education should take the lead to provide policy and financial support for experimental teaching construction of characteristic majors in colleges and universities, coordinate resource allocation among colleges and universities, and promote resource sharing [4].

3.3.2. Enterprise Support

At present, every university directly purchases software from software suppliers to meet the experimental teaching needs of its teachers and students. If software resources are shared on the network, this one-time transaction will be destroyed. Software providers need to change the original charging method and charge according to the service time according to different circumstances and local conditions.

ISSN: 2688-9323

3.3.3. Demonstration Center Take the Lead

The national experimental Teaching demonstration center has strong advantages and regional leading role in management, teaching philosophy. Under the background of the construction of "New economic management", the importance of sharing experimental teaching resources is confirmed. The demonstration center has made constructive achievements in the open experimental teaching system and virtual simulation experimental teaching innovation, striving to achieve a multi-level, multi-school experimental center without time and space restrictions.

3.3.4. Cooperation between Universities

The realization of the sharing of economic and management experimental resources must be inseparable from the active cooperation and cooperation of major economic and management universities. On the one hand, it should cooperate with the construction of shared resource database. On the other hand, we should actively respond to the call to change the original independent service mode, and actively use resource sharing platform and intellectual resources of colleges and universities to increase social benefits.

3.4. Design of System Construction

According to the definition of resource-sharing system, the model of resource-sharing system for economic management experiment is constructed. In the complex resource sharing system, the resource provider, the intermediary and the resource demander can make the resource demander obtain satisfactory resources on the basis of conditionally sharing all kinds of tangible and intangible resources through relevant technology sharing platform. showing in Figure 1.

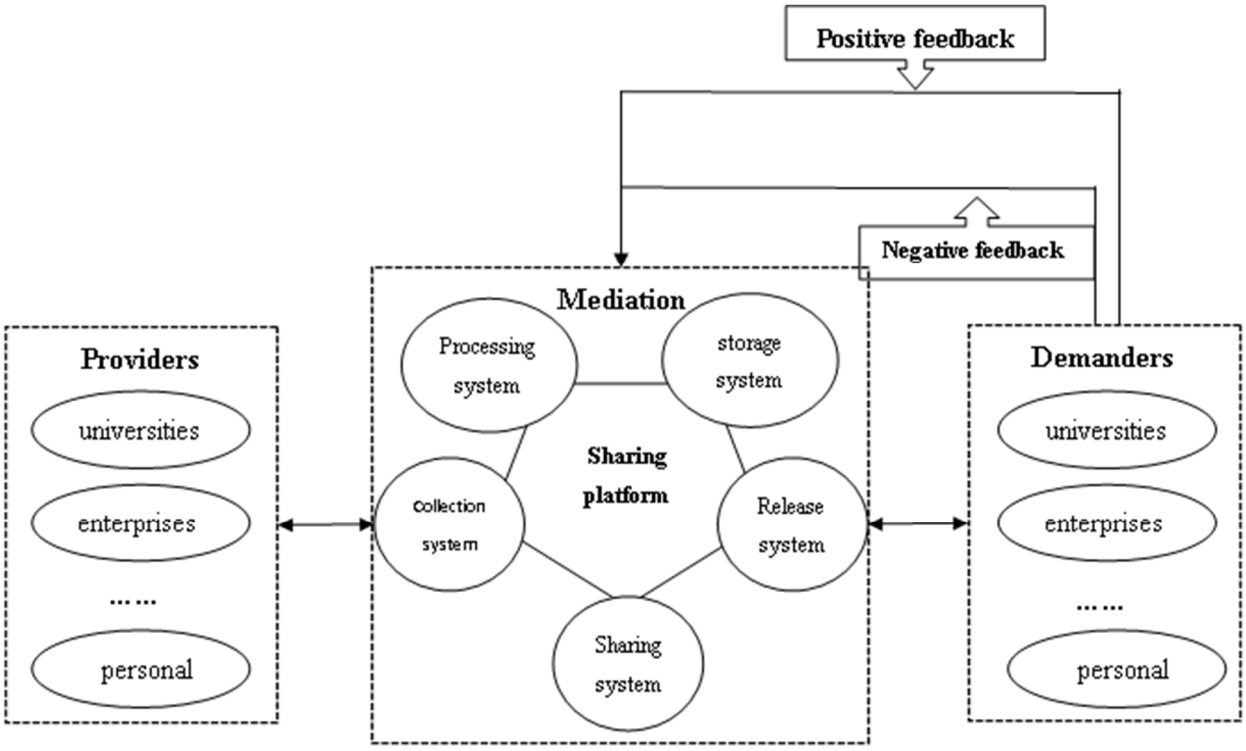

Figure 1. Model of shared systems

ISSN: 2688-9323

4. System Structure Analysis

4.1. Three Information Streams

4.1.1. Demand Information and Provide Information

The existence of demand is the fundamental driving force of resource sharing, and the supplier is the energy input source of resource sharing system. The existence of available resources and the willingness of resource owners to provide resources are the fundamental guarantee for the existence of resource sharing system. Only when resource demand information is matched with resource supply information can it be truly shared.

4.1.2. Cloud Technology to Achieve Sharing Information Platform

The resource-sharing platform of economic and management experimental teaching includes five subsystems: resource collection, resource processing, resource storage, resource publishing and resource sharing management. In order to realize the continuous and stable operation of the five subsystems, the cloud computing technology is able to undertake this task at present to serve China's higher education.

Economic and management experiments are mostly based on computer facilities, with the help of the Internet information platform to complete all kinds of experiments. The sharing service platform provides functions such as inquiry, reservation and use, which enables the sharing to operate systematically, efficiently and stably.

The sharing platform is divided into five parts: Infrastructure services: Infrastructure services provide hardware support for the resource sharing platform and virtualize various devices into a large resource pool by using virtual technology and embedded cloud terminal technology. Resource integration service: The resource integration layer is to build metadata database and index library to facilitate users to search, import and export operations, and lay a foundation for the implementation of application services. Platform application service: the interactive interface is divided into major system modules. Users can access corresponding modules to obtain resources according to their own needs. Access services: mobile client access is mainly provided for different user groups and managers, and users can obtain personalized services through different terminal devices [5]. Service management: the highly integrated experimental teaching resource system of economics and management needs powerful shared experimental teaching management function to control and ensure the healthy operation of the system.

4.1.3. Feedback Information: Including Positive Feedback and Negative Feedback

When the shared experimental teaching resources are not satisfied, it requires the experimental teaching resource sharing system to adjust, find out the problems to improve, to provide better service; When they are satisfied with the shared experimental resources, the generation of new resources will be promoted, so that the demander of resources will be transformed into the provider of resources, and the generated new resources will be collected and applied into the resource sharing system. So that the system in the construction - sharing - application - feedback - reconstruction cycle, continuous development to form a practical resource sharing system.

4.2. "Three Subjects and One Object"

The economic and management experimental resource sharing system is mainly divided into two types of elements: subject and object.

Subject elements are all actors who participate in the resource sharing of experimental teaching of economics and management. The existence of resource demanders is the driving force of sharing construction. They can be individuals, enterprises, universities, etc. In addition, resource sharing can be realized only when resource providers are willing to share the

ISSN: 2688-9323

resources they own, and their organizational form is similar to that of resource demanders. The role of intermediary is to act as an intermediate channel for effective matching in resource sharing. Free matching cannot effectively match resources to the best state, so intermediary is a bridge between resource provider and resource demander. The intermediary provides channels for the supplier to release resources, so that the demander has a way to obtain scarce resources at a lower cost, usually by government departments or enterprises.

Object elements are the resources shared among subjects. It can be divided into tangible resources and intangible resources, which are indispensable in the system. Tangible resources refer to equipment, space sites, funds, etc. Intangible resources are classified into information software, technology and teachers [6]. Cloud computing technology is used to realize the information interaction between subjects and objects, and through the interaction of information flow, mutual restriction, mutual influence and interdependence are achieved.

5. Influencing Factors of System Operation

The resource sharing system of experimental teaching of economics and management is constantly exchanging information, energy and material. It is affected by various factors, which are mainly divided into micro factors and macro factors.

5.1. Micro-influencing Factors

Shared cognitive differences: Some people believe that sharing means losing. Some universities may be forced into resource sharing by order rather than initiative, taking but not contributing. Administrators of colleges and universities take the lead in completely changing their ideas, implementing the policy documents of teaching resource sharing, and fully realizing that the sharing of experimental teaching resources is a win-win cooperation and mutual benefit, which can not only improve the efficiency of resource use, but also benefit their own development.

Resource quality: in the resource sharing system, the evaluation of the object resource quality by the subject demander determines the effect and development of resource sharing. The quality standards and selection process for shared resources should be developed before resource collection to ensure the ease of use, compatibility, mobility, and applicability of the resources in the shared system. In addition, to ensure the quality of shared resources evaluation mechanism is essential.

Benefit distribution: only benefit from participating in the process of resource sharing can stimulate the enthusiasm of all members to participate in the construction and sharing voluntarily. The construction of the sharing platform gathers the financial resources and wisdom of many parties, so it is reasonable to provide paid services for resources, and the pricing should be in line with the market. We should establish reasonable distribution plan for these benefits, adhere to the principle of more investment and more income, and achieve sustainable development.

5.2. Macro-influencing Factors

Regional development level: the development status of each region is different, resulting in unbalanced resource distribution. This imbalance has advantages and disadvantages. On the one hand, it leads to resource flow and promotes the generation and development of resource sharing. On the other hand, it also leads to the exclusion of the resource advantage side to the resource poor side. First, pilot operation will be conducted in economically developed and resource-rich areas to form a scale and mature, and then lead less-developed areas to realize resource-sharing construction.

Regulation: regulation is the basis of all management. In the process of resource sharing, there will inevitably be conflicts of interests between subjects, which need to be solved by laws, regulations. The government and education departments have designed the system

ISSN: 2688-9323

scientifically and rationally according to the investigation situation, and continuously refined and improved the standardization and operability construction of the system [7].

Policy: The government should comprehensively consider all aspects, and then issue relevant preferential policies to give all subjects the power to share, to promote the continuous growth and healthy operation of the sharing system. Colleges and universities that actively participate in resource sharing will be given corresponding incentive measures, and they will be taken as a model for promotion and demonstration. For enterprises participating in sharing, according to the comprehensive evaluation of the quantity and quality of resources provided, the outstanding enterprises selected will be given priority to win the bidding in government procurement. Ensure the continuous updating of higher quality resources.

Technology: With the development of society, resource dynamics and instability are strengthened. These characteristics on the one hand stimulate the new demand of the demand side, and on the other hand promote the intermediary to improve the matching efficiency of resources. Organize the establishment of professional technical service teams, formulate relevant training, evaluation and incentive mechanisms, fully mobilize the enthusiasm of technical service personnel for innovation, and constantly improve the technical level and shared service level.

6. Conclusion

"Opening" is the theme of The Times, and "sharing" has become a new development model. Resource sharing of economics and management experimental teaching is a long-term and complicated project. By analyzing the construction of experimental teaching resource sharing system of economics and management and introducing cloud computing technology, the effective construction and sharing of experimental teaching resources can be realized, which is conducive to the comprehensive integration and efficient utilization of experimental teaching resources of economics and management. This will improve the strength and ability of teaching and scientific research for teachers and students and achieve both economic and social benefits. In order to break through the bottleneck and realize truly effective sharing, it is necessary for all parties to make joint efforts to explore and practice, fully demonstrate and implement scientifically, and solve the problems in the process of development, so as to realize the improvement and development of the sharing system of economic and management experimental teaching.

Acknowledgments

Research Project of Anhui University of Finance and Economics (ACYC2020328).

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