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Idea of Resource Saving Higher Education Development on the Integration and Optimization of Educational Resources

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ABSTRACT

The basic thought foundation of the integration and optimization of higher education resources is embodied in the concept of resource conservation and development, with the integration of limited off-campus resources, presenting the resource characteristics. Based on the regional development of resources, make full use of school-based education resources, and highlight regional resource fusion. Through the characteristics of higher education resources, further model and analyze the feasibility of coordination between educational resources. We put forward the thought of integrating the industrialization development of universities. Integrate and optimize the educational resources by combining the development of regional cultural industries. With the assistance of regional economic and industrial development, the industrial economy education resources are actively utilized. Based on the overall form of regional social development, the concept of resource saving higher education development is constructed. With the aim of saving resources, we can effectively optimize the concept of industrialization and integration of higher education resources. Promote the integration and optimization of regional industrialization resources, thus forming a substantive impact on the diversity and multichannel of the development of higher education resources. It is demonstrated that the key to optimizing and integrating the resources of higher education is to explore the concept of resource conservation, and fully study its internal meaning and intrinsic value to reflect its function, thus promoting the integration of educational resources with a strong purpose and direction. The exploration of the resource-saving development of higher education systematically screen the resources of regional humanistic spirit and humanistic quality, which is conducive to promoting the integration of resource elements to promote the overall development of higher education, and develop new ideas for the development of educational resources for the overall construction of humanistic education resources, so as to make the development of humanistic education play a positive role in promoting the overall education.

Keywords: resource conservation, higher education, resource integration, resource optimization

INTRODUCTION

Higher education resource construction should maintain a high degree of unity with social development direction. It should be based on resource conservation and development thought, effective integrate and optimize higher education resources, so as to enhance the practicability and practical value of education resources. According to the basic characteristics of off-campus resources, the targeted and effective integration is made, so that the development of higher education resources has certain characteristics. Relying on the advantages of regional development, the

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Contribution of this paper to the literature

- According to the resource conserving education idea, the feasibility analysis of the cooperation among educational resources was carried out, and the reliability of the study was studied by data validation;
- The study is closely around the integration and optimization of resources, with layers of clear, orderly and progressive analysis;
- The strategy of education resource conservation development was put forward, providing feasible suggestion for the actual education development.

regional economy, culture, humanity, environment and other factors are effectively analyzed, so that the direction of integration and optimization of higher education resources can be kept highly clear. In improving the level of educational hardware resources, the integration and development of software resources are strengthened, and the essence of resource-saving strategy development idear is sublimated (Bai, Jia, Zhai, et al. 2016).

The deepening reform of higher education and resources is the key to the adaptive development of higher education. The starting point of the resource-saving theory is not only the reduction of the input of educational resources, but also the further improvement of the efficiency of the use of educational resources. The effective resources can play the role of promoting, and making concrete development of educational resources (Eiben, and Smith, 2015). Combined with the lower educational resources, and the specific integration of them, the resource characteristics are effective reorganized, which provides a new role in promoting the overall development of higher education curriculum. In view of the innovative ideas of resource integration, the effective integration of the resources around the school can further promote the functionality and service of educational resources. The integration and development of higher education resources have some characteristics, so that the off campus resources and internal resources can effectively integrate, and form new resources of higher education (Ge, and Zhang, 2016; Li, 2015). This is the concrete way to fully improve the effectiveness of educational resource development in line with the idea of educational resource saving, which highlights the innovation of educational resources development thought in the construction of resource-saving society (Lee, Wei, Voss, et al. 2016).

REVIEW OF CURRENT RESEARCH

Domestic Related Research Status

The regional strategic deployment of higher education resources, as an important component of the strategic development target of higher resources, embodies the overall characteristics of the integration and development of integration and regionalization for higher education resources. The geographical resources cover a wide range, including three aspects: regional cultural resources, regional economic resources and regional environmental resources (Liu, Ge, Hu, et al. 2015). Domestic scholars have proposed that the regional environment and human characteristics can be effectively integrated with their environmental and cultural factors according to their characteristics, so that the existing higher education resources can be optimized. In fully developing the hardware resources like educational sites, humanities education software resources can be coordinately developed, and the strategic resources of higher education development can be effectively deepened, to economical development, paving a way to resource-saving development, and laying a solid ideological foundation for constantly rising the utilization efficiency of higher education resources.

Overseas Related Research Status

Regional development of higher education is the basic direction of strategic transformation. The development and optimization of educational resources need to be effectively developed according to the development of regional resources (Menzel, Ranjan, Wang, et al. 2015). Focusing on the local differences in the development of higher education, effectively enrich of educational resources, combined with the basic characteristics of different regional economy, culture, humanities, environment, and make it an important factor of education resource development. Characteristic factors are absorbed, and become the strategic resources of higher

education after adaptive reuse (Ma, 2016; Ma, 2015). Research of overseas university show that in line with the actual situation of the integration and optimization of higher education resources, we should comprehensively consolidate the characteristics of regional educational resources, and explore the necessary factors for the integration and optimization of educational resources. We should dig out the resource factors that match the regional education resources, and integrate them into the educational resource system effectively (Reiche, Verbesselt, Hoekman, et al. 2015). This is the overall path of higher education resources development, but also an effective interpretation of resource-saving development ideas, which fully reflects the application value of the integration and optimization of educational resources, and forms the characteristics of the development of internal factors in the educational resources system (Sommer, Valstar, Leusbrock, et al. 2015).

METHODOLOGY

There are some differences in the construction of higher education resource system, the reason of which is that the development of higher education has certain regional, cultural and essential differences, and the demand direction of educational resources is different. In view of the resource-saving development idea, the key to optimize and develop the higher education resource system is to systematically understand the general situation of its configuration, integrate resources within the system of the same characteristics of educational resources, and combine the same coefficient of higher resources to make the internal adjustment of resources more targeted. Meanwhile, the resources of different characteristics are effectively arranged, and the effects of their coordination are analyzed comprehensively, in order that internal combination function of the higher education resource system can be maximized, and the ratio between the application efficiency and the application effect will be the best (Shen, 2016; Singh, Review, 2015). In this way, the feasibility of mutual coordination and cooperation between higher education resources can be scientifically summarized, and the coordinated and leading role of educational resources can be embodied to the greatest extent, so as to give full play to the role of higher education resources in promoting the overall development of education, providing effective analysis and research data for the comprehensive implementation of the integration and optimization of resources, and broadening the development path of resource-saving higher education resources system. The overall characteristics of the allocation of resources in colleges and universities are integrated, the feasibility of coordination among resources is analyzed, and the integration and optimization of regional industrial resources are promoted.

RESULTS

In order to integrate the overall characteristics of the resource allocation in universities, the feasibility analysis of the coordination among resources is analyzed.

In the analysis of the feasibility of data variable sequences, assume that there are time series variables Y_t and X_t in the integration, optimization and coordination of educational resources, with certain feasibility. Then the correlation regression model is:

$$y_t = a + \alpha x_t + u_t \tag{1}$$

A set of feasible data is like an invisible gravitational regression line, with the values near the regression line constantly regressing to the regression line, and forming a fluctuating regression line around the mean (Yang, Dong, 2016; Zhang, Zhang, 2016). However infeasible sequences basically do not return to a fixed value. Therefore, it is assumed that the mean, variance, and covariance of the random variable V_t are constant in the optimization integration process of educational resources. For any samples t, m, n,

$$\begin{cases} E(V_t) = E(V_{t+m}) \\ Var(V_t) = Var(V_{t+m}) \\ Cov(V_t) = Cov(V_{t+m+n}) \end{cases}$$
 (2)

Integrating and optimizing the educational resources is called a feasible process. For all values t, m, n, A sequence of education is V_t feasible, and then it can be denoted as V_t : I(0). The cooperation among educational resources is feasible.

Table 1. Descriptive results

Dependent Variable: Y Method: Least Squares Included observations: 97							
				R-squared	0.6010	Mean dependent var	15.4389
				Adjusted R-squared	11.1014	S.D. dependent var	14.4784
S.E. of regression	13.5359	Akaike info criterion	3.5301				
Sum squared resid	31.4610	Schwarz criterion	4.2564				
F-statistic	1.5451	Durbin-Watson stat	0.5681				
Prob(F-statistic)	0.0325						

According to the above formula (2), a descriptive analysis of the optimization results of educational resources integration is made, shown in **Table 1**.

It is clear in **Table 1** that the R² value of the model is 0.6010, indicating that the regression items accounted for as much as 70% of the explanation part for the studied variables, the choice of resources integration is appropriate, and the regression results have certain reference value. The test values of AIC and SC for the model are 3.5301 and 4.2564, respectively, indicating the model used in this study passed the validity test of the Akaike information criterion and the Schwarz information criterion. Therefore, the model used in this study is suitable for analyzing the sample data obtained by investigation. The P value of the dependent variable y is 0.0325, indicating the estimated value of the dependent variable is credible in the 5% level of significance. In other words, the estimated value of the studied variable obtained by the model used in this study is very close to the actual value, and the research results have high feasibility.

Integrate the idea of industrialization development in universities and comprehensively integrate and optimize the educational resources of colleges and universities:

Combine the development of regional cultural industries, and effectively integrate the cultural and educational resources. The effective deepening of regional cultural resources plays a more important role in the overall development of higher education resources, and provide strong support for the overall development of higher education and the soft environment construction. The basic starting point of the ideological education resource conservation development is to emphasize the comprehensive construction on cultural resources. Take the regional cultural resources as an important supplement, effectively implement the deep development space of the cultural environment in the higher education system, and promote the effective implementation of the developing plan of talent strategy.

With the assistance of regional economic and industrial development, the industrial economy and educational resources should be actively utilized. The direction of regional economic development, as an important approach to the integration and exploration of higher education resources, is an inevitable choice for the development of higher education resources. According to the main subject trends of regional industrial structure adjustment, actively guide social investment and development priorities, highlight the important role of higher education in the development of social enterprises, and provide favorable conditions for the introduction of the internal resources of higher education. This is the key to the efficient utilization of higher education resources, and also an important challenge to the systematic development of educational resources.

Based on the overall form of regional social development, construct the concept of resource saving higher education development. The important component of the integration and optimization of regional resources in higher education is to explore the social and cultural resources of the region in an all-round way, and absorb valuable experience to enrich the human resources of higher education in an all-round way, so that humanistic education becomes the key link in the development of higher education quality. The idea of resource-saving society development is not merely an effective integration of material resources, but also includes a comprehensive deepening of human resources. This is a new concept in the development of higher education, which enriches the

inner essence of the development and introduction of educational resources, and probes into the integration of subject education resource, optimization and development.

With the aim of saving resources, effectively optimize the concept of industrialization and integration of higher education resources. The purpose of saving resources embodies in the level of resource optimization, and the premise of resource optimization is the effective integration of educational resources, removing unnecessary consumption of educational resources, and purification the function of higher education resources. Combined with the applicability and effectiveness of higher education curriculum, the system of higher education resources is detailedly constructed, and the sources of resource formation factors are analyzed. Take industrial development as an opportunity, and absorb industrial resources effectively, with a long period of processing, in order to make them an important component of higher education resources, and realizing the social sharing of current educational resources. Reduce the cost of resource development and research, and form higher education resources and develop resource saving targets.

DISCUSSION

Effective implement the basic idea of resource conservation, combined with social and economic development trends and the situation, and effectively integrate social education resources, in order to ensure that the development of higher education resources can be supported by regional social and economic development, and that higher education resources can be obtained from various aspects of society. Create more valuable and meaningful new ways of educational resources, and provide sufficient impetus for the integration and optimization of higher education resources. New ideas for the full development of the comprehensive construction of humanistic education resources enhance the connotation of the higher education development, and meanwhile, also provides an ideological concept of effective guarantee strategy for the sharing of educational resources, further supplementing the promotion of the ideological essence of higher education development strategy of resources saving. Further sublimate the substantive significance of the development strategy of higher education resources optimization, and promote the construction of educational resources can follow the basic steps of social development, so that higher education resources and social development can interact and promote together, providing a positive and effective impetus to the development of resource-saving society.

CONCLUSION

The development strategy of resource conserving strategy is the necessary prerequisite for the sustainable development of society, and provides positive ideology guidance for the effective utilization of social environment and resources. The idea of higher education resource conservation development is based on the principle of sustainable development of higher education. Comprehensively deepening the use value of educational resources promotes the interaction between educational resources and social development, and improves the efficiency of sustainable recycling of educational resources. Through the effective integration and optimization of educational resources, the innovation and sustainability characteristics of higher education resources development are manifested, providing effective ideological support for promoting the sustainable development of higher education, which is of great significance to studying and analysing the elements of educational resources.

REFERENCES

- Bai, Y. L., Jia, L. H., Zhai, L. L, et al. (2016). Study on the optimization of on-the-job training teaching module based on the publication of the paper of school health professionals. *Chinese Journal of School Health*, 37, 744-746.
- Eiben, A. E., & Smith, J. (2015). From evolutionary computation to the evolution of things. Nature, 521, 476-82.
- Ge, N., Zhang, Y. C. (2016). "Internet +" professional education resources construction status, challenges and countermeasures. *Chinese Vocational and Technical Education*, 6, 13-18.
- Lee, Z., Wei, J., Voss, K., Lewis, M., Bricaud, A., & Huot, Y. (2016). Hyperspectral absorption coefficient of "pure" seawater in the range of 350–550nm inverted from remote sensing reflectance. *Applied Optics*, *54*, 546-558.

- Li, D. (2015). The resetting and integration of music teaching resources in colleges and universities under the background of quality education. *Heilongjiang Researches on Higher Education*, 12, 30-32.
- Liu, J. D., Ge, Z. H., Hu, X. G, et al. (2015). The innovation and practice of "biyuan integrated" talent oriented training mode for the prevention and control of animal diseases in higher vocational colleges. *Chinese Vocational and Technical Education*, *9*, 38-42.
- Ma, Y. (2015). The function of education at the undergraduate level is pointed and implemented. *Chinese Vocational and Technical Education*, 10, 34-38.
- Ma, Z. Y. (2016). The exploration of the integration direction of education resources in colleges and universities. *Heilongjiang Researches on Higher Education*, *5*, 49-51.
- Menzel, M., Ranjan, R., Wang, L, Khan, S. U., & Chen, J. (2015). CloudGenius: A Hybrid Decision Support Method for Automating the Migration of Web Application Clusters to Public Clouds. *IEEE Transactions on Computers*, 64, 1336-1348.
- Reiche, J., Verbesselt, J., Hoekman, D., & Herold, M. (2015). Fusing Landsat and SAR time series to detect deforestation in the tropics. *Remote Sensing of Environment*, 156, 276-293.
- Shen, W. Y. (2016). Advanced education advantage resources to coordinate development concept and carry out research. *Heilongjiang Researches on Higher Education*, *6*, 28-30.
- Singh, A., Review C. (2015). Computer-based models for managing the water-resource problems of irrigated agriculture. *Hydrogeology Journal*, 23, 1217-1227.
- Sommer, W., Valstar, J., Leusbrock, I., Grotenhuis, T., & Rijnaarts, H. (2015). Optimization and spatial pattern of large-scale aquifer thermal energy storage. *Applied Energy*, 137, 322-337.
- Yang, L. L., & Dong, G. (2016). Internal resource allocation of higher vocational colleges: connotation category, value orientation and operating system. *Chinese Vocational and Technical Education*, 6, 11-15.
- Zhang, B. S., & Zhang, S. M. (2016). Research on the fusion path of education and education. *Heilongjiang Researches on Higher Education*, *3*, 114-117.

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