Article

Research on the Optimization of Vocational Education Resources Allocation Based on Big Data

Jian Huang[1]， Minlong Wei[2,*]

[1] Huanggang Normal University, Huanggang City, Huanggang 438000, China
[2] Jiangxi Aviation Vocational and Technical College, Nanchang City, Nanchang 330000, China

Abstract: This article is based on the resource analysis function of CNKI database, sorting out the keyword network analysis, and then sorting out the current situation of vocational education resource allocation under the background of big data. Then it combs out some problems existing in the current allocation of vocational education resources, such as the total amount of educational resources to be increased, the unbalanced investment in education funds and the lack of data resources professionals. Finally, based on some existing problems in the allocation of vocational education resources, this paper puts forward some solutions, such as multi-online education based on the platform, and the education policy under the principle of resource integration and sharing in colleges and universities.

1. Introduction

Online teaching based on big data's technology organically combines Internet services, teaching and teaching, breaks through the limitations of time and space of traditional school teaching, and provides customers with various forms of training. so that they can take the initiative to participate, and give them timely feedback, continuous innovation of the teaching model. [1]. Network education can achieve the maximum absorption and distribution of resources. On this basis, it can also provide a single technical function for a single business, so as to meet the customized business requirements. The development of web-based teaching depends on learners' autonomous learning ability and the resources they need. In order to better analyze and share the data, we must expand the scope of research through speculation and prediction in order to meet the best demand for talents. The rational distribution of China's educational resources has become a major strategic task of China's educational

reform and development. This is a major event that the country pays close attention to, and it also indicates that China's higher vocational education has once again ushered in a new round of development. Higher vocational education has a bright future, and skilled talents have a bright future. It is a kind of incentive, a kind of spur, a kind of guidance, a kind of incentive, a kind of guidance, a kind of future vocational education.

2. Current situation of vocational education resources allocation

Taking the keyword co-occurrence analysis of "vocational education resource allocation" as an example, it is shown in figure 1, in which the keywords such as specialty setting, resource allocation, vocational education development, rural vocational education and vocational education resources appear more frequently. it can be seen that the allocation of vocational education resources needs the integrated and coordinated development of these aspects.

Figure 1. Keyword co-occurrence graph.

How to distribute the resources of higher vocational education reasonably is an important topic in the development of higher education in our country. Vocational education group is a kind of education group with the purpose of resource sharing. The construction of vocational school groups has been carried out in China since the end of the 20th century, and a variety of school-running modes have been formed. Generally speaking, it mainly includes: first, the allocation of higher vocational education resources; the second is to discuss some problems in the allocation of higher vocational education resources; the third is to optimize the allocation strategy of higher vocational education resources. In the article "Countermeasures for the optimal allocation of resources in higher vocational education", through the analysis of the current situation of the distribution of resources in higher vocational education, from the aspects of changing the input mechanism, changing government functions, perfecting the mechanism of resource sharing and sharing, etc., this paper probes into the rational distribution of resources in higher vocational education. [3] .the allocation of higher vocational education resources is the sum of all the human, material, financial and information resources paid by the whole society to train skilled and applied talents. However,

at present, the distribution of resources in higher vocational education in China is unbalanced. First of all, the distribution of higher vocational education resources among regions is uneven. At present, the distribution of higher vocational education resources in China is not balanced, and the degree of development is not balanced. In our country, there are many regions and schools in higher vocational colleges, and there is a shortage of resources. This imbalance will lead to the inequality of employment opportunities, and then affect the all-round development of vocational education. At the same time, there are also some problems in the construction of teaching staff in higher vocational colleges, such as lack of professional connection, unreasonable structure of teachers and shortage of funds. Many colleges and universities have some problems, such as overlapping majors, no characteristics, no advantages and so on. The structure of teachers is not reasonable, and there is a shortage of teachers with both practical work experience and professional ability. In addition, the shortage of funds is also a main reason that affects the development of higher vocational education.

3. Main problems in the allocation of vocational education resources

3.1 The total amount of educational resources needs to be increased.

In recent years, with the expansion of the scale of higher vocational education, the enrollment scale of higher vocational education is increasing year by year. With the rapid development of education in China, education in China is facing a series of problems of shortage of resources. At present, there are some problems in university library, such as books, teaching facilities and so on. In modern society, the demand for high-tech talents is increasing, and enterprises are in a period of rapid development and improvement. As the quality of the staff of vocational education resources is getting higher and higher, every school is facing a severe situation of shortage of teaching resources. There is an urgent need to expand the scale of schools and increase investment in teaching resources.

3.2 unbalanced investment in education funds

The economic development of a region refers to the degree of development of higher vocational education in this region, which directly affects the scale and quality in this region, and then affects the structural changes of higher vocational education in the region. The imbalance of investment in higher vocational and technical education is mainly caused by the imbalance of investment in higher vocational and technical education. Due to the nature and industry background of vocational schools, the subsidies given to them by different competent departments and industries are also different, so the amount of funds is also quite different, which depends on the financial resources of the country. some places with weak financial resources do not even have funds.

3.3 Vocational colleges lack of teachers

At present, the number of practical teaching teachers in higher vocational colleges is short, and the professional background of most teachers does not match the practical teaching content, and the teaching experience and practical experience are not rich enough. The number of "double-qualified" teachers is insufficient and the proportion is low. As a type of education to cultivate skilled talents, vocational education requires teachers to have not only general teaching ability, but also engineering practice ability. Vocational colleges also have a high demand for teaching quantity and quality. Some professional teachers have low academic qualifications and titles. Due to the expansion of vocational colleges, the growth rate of teachers can't keep up with the growth rate of students, and the proportion of "double teachers" can't reach the level of vocational colleges, which shows that there is a serious shortage of teachers in vocational colleges.

3.4. Lack of data resources professionals

Online education can cover a variety of forms, including massive open online course and flip classroom, and requires highly specialized educational talents. This kind of talents should have the dual attributes of educators and data processors, but from the perspective of big data, the talents needed for online education can be divided into content designers needed in the previous stage of data, application operators needed for data processing, and educational instructors needed for digital education. At present, designers can be replaced by traditional educational content providers, and operators can rely on computer professionals to solve the problem. However, there is also a shortage of personnel such as teaching supervisors who have the comprehensive ability of education and teaching, such as resource management and data application. The shortage of professionals is serious, and schools have to supplement single professionals, which will directly affect the collection, integration, classification and research of education and teaching data.

3.5 Learning inertia caused by data overload

In the process of online learning, the data is very rich, and students are getting closer and closer through pictures, videos, sounds and other stimuli. On the one hand, people need energy and data resources, especially the ability to solve problems. It is not easy to find a solution, which has nothing to do with active activities and discovery, but it can be obtained by collecting and analyzing more suitable data methods. Although forecasting has been developing technology and increasing models, human forecasting is an unknown factor. Education still depends on changing real data. When people know the details of their future development, their interest in education will be weakened and their investment in online education will be reduced. Therefore, publishing these results can bring about previous learning changes.

4.Optimization of Vocational Education Resources Allocation in the Era of Big Data

4.1 College resource integration

To achieve efficient sharing of educational resources is an important way to achieve the sustainable development of education. In order to expand the scale of infrastructure and enhance the competitiveness of universities, higher vocational colleges can make their teaching resources better integrated by sharing resources among schools, including equipment and facilities, training conditions and so on. In this case, through the effective sharing of high-quality resources, the efficiency of vocational education can be improved, at the same time, the cost of vocational education can be reduced and the financial burden of vocational education can be reduced. In addition, we can also invite some excellent teachers from overseas schools or enterprises to carry out teaching and research, absorb all the good things from foreign schools and companies, and increase the number of teachers in schools. alleviate the actual situation of insufficient student-to-student ratio, so as to promote the sustainable development of education among universities.

4.2 Multiple online education based on the platform

With the platform as the intermediary, a number of online teaching in the big data era have been established, which can accurately transmit technical methods and information stock, so that individuals can carry out "convenient teaching" at any time in their daily life. [4] some schools and education departments have built corresponding application platforms in many aspects, which have greatly improved the utilization rate of teaching resources. In order to meet the personalized teaching needs, we need to start from two aspects: first, to improve the degree of sharing of teaching platform resources. In order to change the idea that traditional platforms store resources in a specific field, and make full use of big data, it is necessary not only to collect information about educational institutions, but also to collect data on education orientation at all levels and industries, such as politics, economy, society, and so on. Focus on strengthening efficient sharing, processing and manufacturing educational materials as raw materials, generating new modular knowledge products, and exporting and sharing them. The second is to improve the efficiency of the supply of resources, change the original one-to-one provision of educational resources into many-to-many information cross-platforms, and put all kinds of educational resources into the platform as far as possible through the network within a certain period of time, so as to make the market of products embedded in a wider range of people and provide diversified products for various markets. On this basis, this paper proposes a multi-dimensional interactive teaching model based on the network environment.

4.3 Education policy under the principle of sharing

In the environment of big data, the key to how to optimize and optimize the network teaching resources lies in how to collect and classify the massive data. If we want to improve the quality of network teaching, we must digitize the existing teaching resources on a large scale. Based on the networking of laws and regulations, combined with the principles and guidelines of educational development, the online educational data are managed and disclosed, and the existing resource sharing platforms are deeply studied to improve the

utilization of resources. according to the principle of educational resource sharing, converting the existing traditional educational resources into online digital resources can not only increase the quantity, but also accelerate the circulation of resources.

Including internal interconnected resources. Under the framework of import and export criteria, the campus network teaching resource system also has some natural resources, especially today's large number of online educational resources, which are personalized, diversified and constantly improving, but these are all things that need to be shared [5]. Only with high-quality teaching resources can the network teaching resources be optimized.

5. Conclusions

With the arrival of the era of big data, big data's deep integration with other fields of science, technology and education has had a far-reaching impact on the distribution and interactive structure of educational resources. The publicity and popularization of materials have an impact on the traditional concept of education in rural areas. It can be said that the use of information technology such as big data provides a new way for the optimal allocation of educational resources in rural areas of our country. It is difficult to obtain timely and relevant educational materials in remote areas, and the difficulties and limitations of obtaining these materials. By breaking through the time and space constraints such as big data, rural teachers and teachers can obtain high-quality educational resources according to their own conditions and needs. This is not only conducive to the effective allocation of high-quality educational resources, but also conducive to promoting the balanced development of basic education in China. In the past, only cities were able to provide general educational resources such as programs, videos and public libraries to rural areas. Big data and other scientific and technological means not only provide multi-level, multi-faceted and multi-channel educational resources for rural areas, but also bring high-quality education and large-scale resource sharing. Based on this, rural primary and secondary schools can strengthen research-based and immersive learning, improve students' self-study ability and simplify teaching resources by means of classroom network and multimedia equipment. In terms of education. The number of rural teachers is small and the overall quality is low. With the widespread use of big data, it is possible to build a regional teacher resource database. In addition, in recent years, the state has issued a series of preferential policies on the recruitment, placement and treatment of rural teachers. The number of teachers in urban and rural areas has reached a relative balance, and the shortage of rural teachers has also been alleviated. Optimizing the allocation of educational resources has promoted the rapid development of education in China's rural areas. Under the strategic framework of rural integrated development, the construction of a reasonable and coordinated layout of educational resources is of great significance to narrow the differences in educational development between urban and rural areas and regions. Using big data to optimize the allocation of rural educational resources is the key to promote the scientific development of rural education and integrate educational resources.

Conflict of interest: The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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