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Research on ERP Software Course Optimization Based on Big Data Technology

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Abstract: With the development of the times, the progress of society, the continuous improvement of human science and technology and cultural level, big data technology is also rapid development with the pace of the times, now, in people's daily production and life, big data technology has been widely used. In this increasingly competitive society, all walks of life must have a clear understanding of the current development tasks if they want to keep up with the development trend of the times. The development of ERP software can also be defined through the analysis of big data technology. ERP software course is mainly a course integrating theory and practice. The main purpose of ERP Course in Colleges and universities in China is to meet the new requirements of society for ERP talents in the new era, and to better adapt to the needs and management of enterprises for students. Therefore, this paper puts forward the method of combining big data technology with ERP software course optimization research, analyzes the current situation of ERP software development, and combines with the new requirements of the new era society on the theory and practice of college students, so as to guide the development of ERP software course in Colleges and universities in China. Through the analysis, it is found that the method proposed in this paper is of great significance to the optimization of ERP software course.

Keywords: Big Data Technology, ERP Software Course, Science and Technology Culture, Development Path

1. Introduction

At present, China is striding from the industrial age to the information age and the Internet era. The society is in the process of unprecedented great change, reshuffle and innovation. Big data technology



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[1-2] has played an active role in the wave of reform and innovation through a series of high-speed computing and large-scale data integration. The research of big data technology has great advantages in data receiving, processing and problem analysis and processing. With the rapid development of Internet plus and AI [3-5], the research on big data technology has put forward higher requirements and challenges. Therefore, many experts and scholars at home and abroad have studied and explored big data technology from different angles. It also gives different definitions.

Enterprise resource planning (ERP) has been accepted by enterprises rapidly since it was put forward. ERP software [6-8] developed based on this principle has become a tool for enterprise decision-making and daily work management. With the increasing demand for ERP talents from all walks of life, since 2000, colleges and universities in China have started to offer ERP courses. ERP principles and application courses have become compulsory courses for management, e-commerce, computer, machinery and other majors. Compared with other majors, management majors emphasize the principle, practicality and operability in the study of this course. The essence of the so-called ERP principle is the integration of various modern excellent management concepts and theories. Based on the background of manufacturing industry, this paper discusses the application of some modern management theories [9-10] in enterprises. At the same time, the software developed according to ERP principle has become one of the main contents of this course.

This paper mainly studies the optimization method of ERP software course based on big data technology. Under the background of the development of the current era, the development of all walks of life is becoming increasingly fierce. In order to meet the new requirements of the theory and practice of ERP talents in the new era, this paper puts forward the method of combining big data technology with ERP software course, and analyzes the current development of ERP software course. According to the new requirements of ERP talent development; the corresponding development plan should be made.

2. ERP Software Course Optimization Method Based on Big Data Technology

2.1 Big Data Technology

With the deepening of big data research, cloud computing will become the most direct beneficiary. With the help of big data technology, cloud computing has gradually gone through the initial stage of simple workshop and resource pool. The integration of the underlying resources is slowly transferred to the data analysis, prediction and application of the upper layer, which changes the complex state of the cloud computing industry chain, and will become an indispensable part of the future. Through big data technology, enterprises can complete a series of deployment such as one-stop service and intelligent technology application, automatic analysis, extensive calculation and prediction, which plays an important role in promoting enterprise innovation.

2.2 ERP Software Course Optimization Method

In the "ERP software application" open experimental teaching mode, the experimental teaching is divided into two parts: conventional experimental teaching and open experimental teaching. The routine experimental teaching is carried out in the experimental class specified in the teaching plan, and the required experimental modules specified in the experimental outline are completed. Through

the experiments of these modules, students can master the basic principles and operation methods of ERP software. Open experimental teaching is an effective supplement and extension of traditional experimental teaching. In order to expand students' knowledge, exercise and improve their comprehensive application ability of ERP software, we open and guide students in their spare time.

3. Experimental Correlation Analysis

3.1 Experimental Background

Oracle aim is a structured implementation method, including the methods and steps needed to implement Oracle application products. These methods and steps are pre-defined, which can be effectively managed through a variety of methods, guide and help consultants to reduce the implementation risk as much as possible in the implementation process, so as to achieve the rapid and high-quality requirements of Oracle application system.

3.2 Experimental Design

Oracle method is the general term of Oracle methodology, which is a set of enterprise system implementation scheme. It consists of aim, PJM, BPR and CDM. As shown in Table 1, the relationship between these methods is described in detail.

Table 1. Oracle method structure diagram

Business strategy and mission	Business Process Reengineering		
	Information system strategy	Enterprise technology system	Customized development methodology
			Application implementation methodology
Practice Management	Organizational change management		
Bid&Proposal Management	Program management, □		
	project management		
Process management			

4. Discussion

4.1 ERP Software Course Optimization Analysis Based on Big Data Technology

According to the survey and statistics of domestic well-known IT consulting and research institutions in 2019, the informatization work of small and medium-sized enterprises in China has made great achievements. More than 75% of the enterprises have started the department level management information system. The commonly used information systems include financial software of financial department, e-mail of company level, office automation system, etc. However, a few years ago, most small and medium-sized enterprises did not realize the importance of ERP system, resulting in low utilization rate. In recent years, small and medium-sized enterprises gradually realize the urgency of establishing modern management system by using advanced information technology, and begin to introduce ERP software. This paper investigates the investment of ERP software in China's enterprises in the past five years, the survey results are shown in Figure 1:

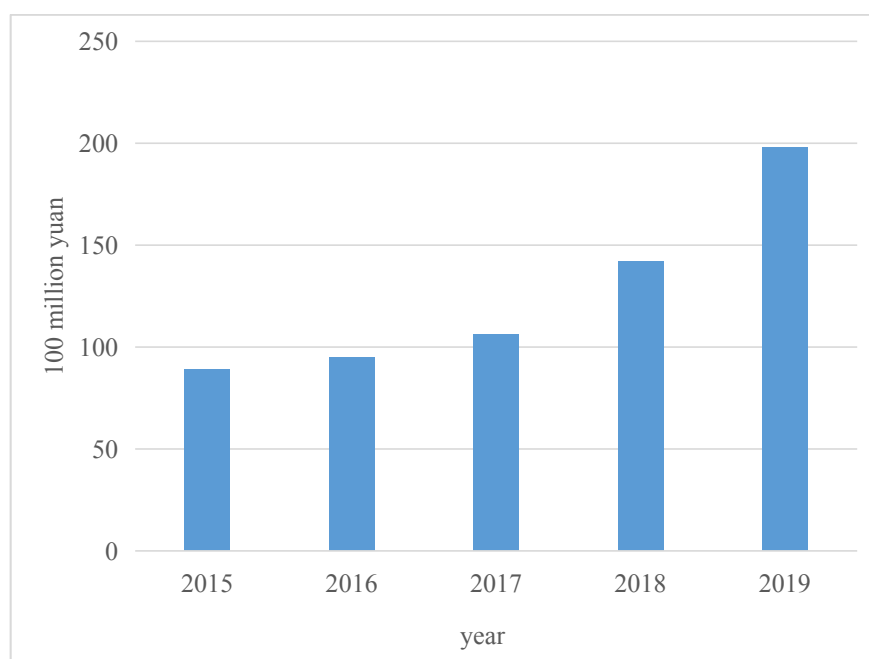


Figure 1. The market scale of ERP software market in small and medium enterprises in recent years

As shown in Figure 1, the amount of enterprise ERP software investment in China has gradually increased in the past five years, and the growth rate is faster and faster in 2017, 2018 and 2019. This shows that in recent years, most enterprises in China pay more and more attention to the application of ERP software in enterprises, and realize that the management of enterprises through ERP software can greatly help the development of enterprises Enhance the core competitiveness of enterprises to achieve the goal of sustainable development.

In the process of implementing information strategy, different enterprises have different methods. Some enterprises only focus on the immediate interests, and do not consider the development of ten years or even longer. Therefore, they often pay more attention to the price and whether they can meet the current business needs in the choice of information products. But after a period of development, they will soon find that the original information system can no longer meet the needs of enterprises, and they have to give up and start again, wasting a lot of human and material resources. Of course, there are also quite a number of small and medium-sized enterprises will stand in the height of

long-term development of enterprises, and choose products that can meet both the current business needs of enterprises and the future development of enterprises. For excellent enterprises, they not only want to buy an information system, but also hope to introduce a new management mode representing the advanced level of the industry. This paper takes the annual development report of Chinese enterprises in 2019 as the research object. Figure 2 reveals the different value orientations of small and medium-sized enterprises. In the figure, I stand for training, II for function, III for business optimization, IV for ease of implementation, V for ease of use, VI for service, VII for price, and VIII for advanced concepts.

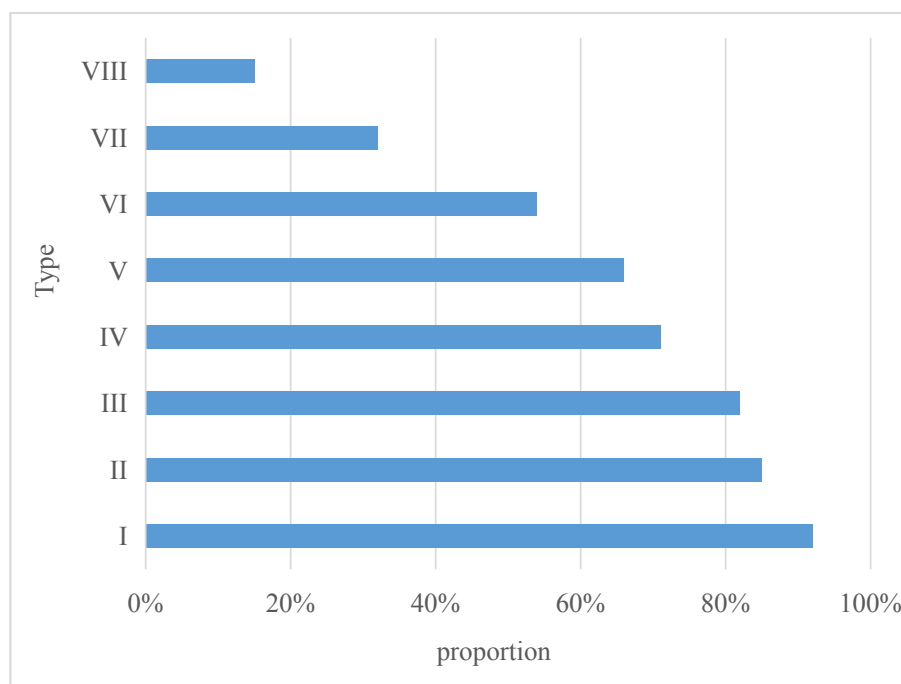


Figure 2. Value orientation of ERP application in domestic small and medium enterprises

According to the content of Figure 2, enterprises attach great importance to the training, function and business optimization function of enterprises in ERP software. However, due to various resources, small and medium-sized enterprises cannot compare with large enterprises. The quality of talents is low, the management level is low, the professional information talents are short, the investment is small, and the effect is fast, so it is difficult to realize the small enterprises. On the one hand, the implementation of ERP involves a relatively small number of users. On the other hand, there are relatively few. These factors enable the system to be implemented quickly in SMEs. In addition, due to the relatively low management level of small and medium-sized enterprises, they prefer to integrate advanced management concepts and pre-configured systems. Generally speaking, senior leaders of small and medium-sized enterprises are willing to take charge of the system themselves, which gives strong support to the implementation of the system, and they will fully cooperate in terms of capital and manpower. In addition, senior managers of enterprises have a clear understanding of the realization of informatization, A clear demand, and a strong "comprehensive control ability" of the enterprise, all these pave the way for the realization of informatization, accelerate the implementation progress, and improve the application effect. Therefore, the implementation of SMEs still has its own

advantages.

4.2 Suggestions on the Optimization and Development of ERP Software Course Based on Big Data Technology

ERP is a complex and huge system, the difficulty of teaching is objective. In order to solve the difficult problem of ERP Teaching, the key is to locate ERP teaching correctly. ERP teaching cannot ignore the discussion and understanding of the basic theory of ERP system. Only on the basis of mastering certain theory can we grasp the principle and basis of system operation. However, theoretical teaching is only the foundation, not the whole of teaching. The main purpose of learning ERP system for higher vocational students is to use it in practice. However, ERP Teaching is also different from enterprise training. Although ERP teaching cannot be separated from the reference and Simulation of enterprise training, it cannot copy the methods and cases of enterprise training. In order to realize the effective improvement of ERP Teaching in higher vocational colleges, the establishment of ERP teaching simulation platform is an alternative method. Through the simulation of the enterprise environment, students can form a certain perceptual knowledge of the organizational structure, workflow, rules and regulations of the enterprise; it can give students a feeling of being in the scene, let them have a feeling of being in the situation, and promote students to think actively. It can simulate the functions of enterprise posts, make students familiar with the business process of specific posts, enhance students' understanding and feelings of affairs and processes, build a bridge between abstract and concrete, and realize classroom interaction through the cooperation of different posts. According to the teaching case of specific system business design, the study optimizes and clarifies the key parts of the system from different angles in the case of enterprise training. Firstly, students can master the key parts of the system, and then gradually accumulate, expand and extend the branches of the system to adapt to the learning habits and cognitive rules of higher vocational students, and help them understand and master ERP theory, And to meet the requirements of the enterprise post skills.

ERP system is an advanced software system, which contains advanced management ideas and methods. Its core idea is to manage logistics, capital flow and information flow in a unified way, and comprehensively consider the enterprises owned by materials, equipment, capital, human resources, information and other resources, so as to maximize the existing resources of enterprises and achieve greater economic benefits, Scientific and effective management of human, financial, material and other resources and production, supply, marketing, warehousing and other business work.

Because ERP has not formed a systematic sales market in China, the relevant laws and regulations are still in a blank state, leading to some irregular behaviors. As a result, some companies neglect the specific situation of the buyer in order to improve the sales performance, and the after-sales service is not in place, resulting in the buyer cannot achieve the expected effect in the actual operation.

After entering the new century, under the guidance of the strategy of "driving industrialization with informatization" advocated by China, the whole society has actively carried out informatization construction, and the process of enterprise production informatization and modernization has been accelerating. All enterprises actively introduce the latest management system and concept, in order to occupy a place in this information war. Some enterprises that cannot keep up with the times are facing the crisis of losing market share or even bankruptcy. ERP system is also introduced into China with

this information tide, and is accepted by many enterprises. Thousands of enterprises compete to use ERP system in daily management. Through the convenient and efficient ERP system, enterprises can integrate their supply chain control, reduce operating costs, improve resource utilization efficiency, and bring significant economic benefits to enterprises.

The rapid development of information technology has greatly accelerated the modernization and informatization process of manufacturing enterprises. Manufacturing informatization has become the development trend of globalization. Management digitization represented by enterprise resource planning (ERP) is an important embodiment of manufacturing information technology characteristics and an important aspect of manufacturing information engineering in China. As an integrated enterprise management information system, ERP is a masterpiece of the combination of computer technology and enterprise management technology. In recent years, more and more enterprises adopt advanced technology, which improves the overall efficiency and market competitiveness of enterprises.

5. Conclusions

This paper mainly introduces the ERP software course optimization method based on big data technology. With the development of the times, the competition in many industries is becoming more and fiercer. In order to develop efficiently in this era of big data, we must improve our core competitiveness, know the development theme of the times and develop in combination with our own characteristics. In order to optimize the course of ERP software in the new era, this paper puts forward the method of integrating big data technology with ERP software course, analyzes and studies the current development situation of ERP software, and formulates the corresponding development plan according to the new requirements of the current era for students' theoretical and practical ability. Through the analysis, it is found that the method proposed in this paper is of great significance to the optimization of ERP software course.

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