Platform Data Extraction and Optimization of Modern Educational Administration Information System Based on Matlab Optimization

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Abstract:Thus, a future network architecture that integrates content and services is proposed. CoreNet is based on content- and service-oriented design concepts, and allows applications to express their willingness to communicate explicitly through a flexible protocol stack "waist" design. With a view to systematically introducing Western cultures, students can learn languages while taking advantage of these new media cultures. Understand cultural connotation more comprehensively, increase understanding of Western culture and language, and cultivate cognitive ability of Western culture. Analyze and explore the problems of cross-cultural communication in English under new media communication, and propose some effective cross-cultural communication in English Countermeasures, hoping to promote the better development of English cross-cultural communication.

Keywords: Cross-Cultural Hybrid System, New Media Network Architecture

1. INTRODUCTION

Nowadays, the teaching quality evaluation system of colleges and universities is used by many colleges and universities for teaching management. However, in the process of carrying out teaching quality assessment, some new problems and things [1] need to be solved. Starting from the data of college students' teaching evaluation, this research uses MATLAB tools, alpha reliability coefficient method and principal component analysis to find out the main factors that will affect the teaching evaluation data. Academic administration is based [2] on information. Information processing, transmission, processing, feedback, etc., every link is very important. The establishment of an information-based educational administration platform is the premise of educational work reform [3].

Most of the large-scale informatization construction in my country's colleges and universities began in the 1990s. In recent years, Liaoning Institute of Science and Technology has expanded enrollment [4], focusing on quality education and personalized education, cultivating students' innovative spirit and practical ability. Therefore, the amount of information and a series of work such as information collection, transmission, processing, storage and query [5], as well as the workload of forecasting and decision-making have been increased, which has doubled the management workload. important subsystems, and its security is equally important. Aiming at the security problems that existed in the educational administration system in the past, this topic studies and proposes to use the role-based access control (RBAC) [6] control method to control the user's operation access to the system resources after the user's identity authentication is legal.

Teaching management in colleges and universities is a complex system, and teaching [7] management involves many links, such as student registration, plan issuance, course selection, grade evaluation, teaching evaluation, and practical teaching management [8]. The traditional manual management model not only has a huge workload, but also generates a large number of archives and files in the management process. The process is complex and time-

consuming [9], and requires a lot of manpower. Higher education informatization is to promote higher education reform and innovation and improve quality. It focuses on promoting the in-depth [10] integration of information technology and higher education, promoting the modernization of educational content, teaching methods and methods, and promoting [11] the overall improvement of the quality of higher education [12]."

This results in extra waiting time; the teaching administration staff manually arrange courses, the number of courses is huge, and they [13] need to communicate with the department head and the teacher repeatedly, resulting in delays in work; the data storage and application review in the teaching administration work [14] are manual operations. , the lack of the assistance of the information platform, etc., these situations are more prominent in the operation and management of educational affairs [15]. The rapid development of computer network technology and information technology has had a huge and far-reaching impact on the production, life, thinking and behavior of human society. It has a revolutionary impact on the development [16] of education. The application of information technology to education has become an important means of realizing modern education at home and abroad. The informatization construction of various colleges and universities has [17] entered the stage of general application, and the process of informatization of educational administration has also been greatly accelerated. However [18], there are not many foreign researches on the software of logistics integration and optimization.

The logistics software designed and developed by et al. achieves better integration of distributed communication systems. et al. [19] focused on the study of the logistics environment, and researched, developed and designed logistics software to analyze and integrate the logistics environment. There are many forms of teaching quality evaluation, such as [20] leader evaluation, expert evaluation, teacher self-evaluation and student evaluation of teaching. Since students have the most comprehensive and profound understanding of teachers, and can also compare teaching quality horizontally (between teachers) and vertically (same

teachers at different stages) [21], to a certain extent, students can give a wider range of And more objective teaching evaluation. In recent years, almost all colleges and universities have used educational affairs network management system, including Qingguo educational affairs management system, Zhengfang educational affairs management system and other educational affairs [22] network management systems developed by various universities themselves. But the main functions are basically the same. It is divided into the following modules: teaching planning subsystem, teaching resource subsystem [23].

Therefore, education informatization has become the main research topic of the current society, and it is an effective way to cultivate talents. In foreign countries, many universities already have relatively mature experience to carry out educational administration [24] informatization. The informatization of educational administration has also been carried out for many years, and the system mode is mainly composed of B/S mode, that is to say, the data is centrally stored and distributed [25].

2. THE PROPOSED METHODOLOGY

2.1 The Matlab-Optimized Modern Educational Administration Informationization

The principal component analysis method of modern educational administration information optimized by Matlab is an important multivariate statistical analysis method. It uses a dimensionality reduction method to replace the original high-dimensional variables with a few new low-dimensional comprehensive variables. Usually in practical applications, the score ranking It is enough for the sum of the contribution rates of the top principal components to reach more than 85%. But at the same time, the workload on the server side will become correspondingly large, not only to realize the access to the database, but also to realize the application execution of the program. In the B/S structure, the client is mainly responsible for the interaction between the user and the application system. The task division is actually to decompose the function of the system, and the function refers to the tasks that need to be executed, and the task set is the collection of all functional tasks. 2) Role set: roles correspond to multiple tasks to be performed, so roles are set according to tasks, and permissions are granted to roles.

A character set refers to a collection of all characters. Permission set: The system permissions that a role has are determined by the task set corresponding to the role, and the permission set of the role corresponds to the calls to each module. Because the teaching managers in colleges and universities are busy dealing with a large number of business work, they lack communication and communication with teachers and students at the grass-roots level, so they are prone to conflicts with teachers or students due to business work in the process of business work, and they need to be constantly coordinated and dealt with. H The existing course scheduling process in colleges and universities is to first arrange school-level public courses, and then arrange college-level professional courses. After the school-level public courses are arranged, the Academic Affairs Office will issue the basic curriculum, also known as the public curriculum. At this time, the arrangement of college-level professional courses will be carried out. X Academy has no public courses for the whole school, so it is only responsible for the arrangement of the professional courses of the Academy.

2.2 The Platform Data Extraction Of Educational Administration Information System

The goal of process optimization can be summed up as the significant improvement of educational administration management in five process aspects such as course selection, such as work efficiency, quality, educational administration personnel and teacher and student satisfaction and other key indicators. Pressure and other aspects should be significantly improved. After the trial and questionnaire survey, the overall performance evaluation should be above good. Each node in the supply chain is each enterprise, and the enterprises with various functions of logistics are often separated from each other and lack the ability to adapt to changes in the external environment. To implement logistics integration and promote its development, the rapid transmission and sharing of information is a necessary objective condition. At the same time, the enterprise should establish a unified scientific management mechanism to eliminate unnecessary losses in many links.

These 11 functional modules are in charge of each department of the Academic Affairs Office according to different educational administration content, and each department is in charge of one or two management modules. Each teaching department installs the client and performs the initial information input. Based on network shared resources, it provides the function of freely setting the school's various re-taking regulations; students can re-take elective courses; if the re-taking course needs to form a class, it is necessary to formulate the teaching task of the re-taking course first. The teaching management information systems built by many colleges and universities often only Focusing on one aspect, the lack of comprehensive consideration of the connection between the teaching management department and the department has led to some colleges and universities' academic affairs offices purchasing database management software for daily management of students' class scheduling, student status registration, grades and credit management, etc. to complete the schedule.

2.3 The Modern Educational Administration Information System Based on Matlab Optimization

If the courses to be retaken do not need to constitute a teaching class, the system will create a virtual teaching class, but there is no need to prepare a curriculum. However, in terms of students' evaluation of teaching, teachers' listening to lectures, after-class practice, correction of homework and examination forms, etc., they still remain on paper media and manual operations, without the use of information technology, and the monitoring and feedback mechanism of the teaching process is still not perfect. Automation is the use of information technology to automate the right processes. Data aggregation, analysis, statistics and other work that can be done by computers can be used to replace manual work, which can not only reduce the work pressure of educational administrators, but also improve work efficiency and accuracy. When optimizing the data distribution process for freshmen, the re-engineering method of process task automation is adopted. First, the manual collection of basic student information data is replaced by the second-generation ID card reader to improve the collection efficiency and reduce errors to the greatest extent; The student status data is connected with the academic and engineering department to realize the sharing of student status data.

In this model, the output results are shown on an interface. Similarly, each parameter corresponds to two text boxes, one is used for text description, and the other is used to input specific parameter values. The first column of the matrix is the number of cycles, the second column is the number of transport lines, the third column is the program operation time, and the fourth column is the number of newly generated columns. The scientific decision-making and management informatization make full use of the advanced network information technology. In addition, the use of the network information platform can also enable the college and various departments to exchange information and share data, and the management efficiency has been greatly improved. In this way, each department can achieve office automation through a secure local area network.

3. CONCLUSIONS

To analyze the reliability of the data of the teacher evaluation system, the Cronbach reliability coefficient of a teacher's evaluation data can be calculated first. If the reliability coefficient is less than 0.5, it means that the setting of the questionnaire is unreasonable and the questionnaire needs to be reset. Or the development and research of the system, the workload of the comprehensive educational administration system is huge. Especially the completion of the final paper writing, not only did in-depth research and systematic summary of the work done before, but also classified and refined the roles and permissions in the RBAC model, and applied the RBAC model scheme to the Fuyang Normal University. in the educational administration system. From the actual effect, this RBAC scheme can adapt to the system security requirements.

4. REFERENCES

[1]Yin Guocai, Gao Huzi, Zhang Wen, et al. Research on the deployment scheme and database optimization strategy of college teaching management system based on Oralce [J]. Journal of Beihua University of Aerospace Engineering, 2019, 29(5):3.

[2] Guo Shuzhen, Cheng Fangzhao. Research on the optimization and innovation of educational administration management of TVU under the background of education informatization 2.0: Based on the "three-pillar model" of human resource management [J]. Journal of Fujian Radio and Television University, 2020(5):5.

[3] Wei Jiajun. Optimization and innovation of educational administration work in colleges and universities based on educational administration system [J]. Teaching and Educating People: Higher Education Forum, 2019(12):2.

[4] Liang Hui, Fei Shuirong. Optimization Research on Blended Teaching of Higher Vocational Innovation and Entrepreneurship Courses Based on Platform Data [J]. Theoretical Research and Practice of Innovation and Entrepreneurship, 2020(13):2.

[5] Ma Jing. Research and Design of Multi-dimensional Higher Vocational Teaching Quality Assurance Management System Based on Data Mining [J]. Modern Vocational Education, 2020(9):4.

[6] Liu Ying, Sun Baohua, Hu Pan, et al. An overall architecture optimization system and optimization method for an integrated data platform: CN110046143A[P]. 2019.

[7] Chen Li, Fang Jinfeng, Kong Xiaofei, et al. A machine learning platform and a data model optimization method based on the platform: CN109800277A[P]. 2019.

[8] Wang Yongqing, Zhang Fan, Song She. A data retrieval optimization method and system based on elasticsearch: CN112115361A[P]. 2020.

[9] Shan Ying. Influence of modern information technology on career archives management and discussion on optimization strategies [J]. Science and Technology Economics Guide, 2020, v.28;No.721(23):34-34.

[10] Xu Mingming. System and method for data coding optimization management based on multi-modal combination in big data environment: CN109933591A[P]. 2019.

[11] Duan Xiujun. Optimization design and implementation of educational administration system for vocational colleges based on digital campus [D]. Qingdao University of Science and Technology, 2019.

[12] Zhang Hongbingyu, Liu Rui, Cao Hongbo, et al. The dilemma and optimization strategy of informatization teaching management in TCM colleges and universities from the perspective of big data [J]. China Modern Distance Education of Traditional Chinese Medicine, 2022, Vol. 20, No. 3, 165-167 pages, 2022: Key Projects of Tianjin Higher Education Undergraduate Teaching Quality and Teaching Reform Research Plan.

[13] Zhang Wei, Hou Liang. Cloud platform data-driven master-slave collaborative optimization of product and supplier resources [J]. 2021.

[14] Ma Lichao, Jiang Fan. Policy Attention Allocation Deviation and Its Optimization for High-quality and Balanced Development of Compulsory Education: Text Coding Analysis Based on the Three-Dimensional Framework of "Space, Process and Elements" [J]. Modern Education Management, 2021(12) :10.

[15] No. The project "Beijing Normal University Helps Improve the Quality of Basic Education in Shanwei" was officially launched [J]. Journal of Education, 2019, 15(5):1.

[16] Tu Lihua, Yang Fei. Informatization construction strategy of educational administration management in educational institutions based on Internet + [J]. Communication World, 2019, 26(12):2.

[17] Li Qian, Tan Gangping, Xu Jianning, et al. Optimization of university educational affairs information release mode based on information platform [J]. China Educational Technology and Equipment, 2019(6):3.

[18] Xie grablai. Design and optimization of large-scale information management system database [J]. Jiang Science Academic Research, 2022, 17(2):4.

[19] Ni Zilu. On how to optimize management accounting courses under information technology [J]. Quality and Market, 2022(2):3.

[20] Liao Fang. Reform of data management in colleges and universities based on educational modernization [J]. Quality Education in the West, 2021, 7(15):3.

[21] Wei Jianglai. Business process optimization and reengineering based on data sharing platform [J]. Information and Computer, 2020, 32(23):3.

[22] Ma Tian, Yu Guoguo, Song Wenai, Zhang Jing, Dong Wenqiang. Design and Optimization of Student Information Management Database Based on Knowledge Graph [J]. Computer Age, 2020(12):4.

[23] Liu Fang, Xu Xu, Lei Ming. The overall optimization and teaching reform of the curriculum group based on training data analysis ability for information and computing science majors [J]. Mathematics Learning and Research, 2020(24):2.

[24] Zhang Wei, Hou Liang. Cloud platform data-driven master-slave collaborative optimization of product and supplier resources [J]. China Mechanical Engineering, 2021, 32(9):12.

Zhou Xiaoyan. Optimization design of library information management system based on data mining [J]. Information and Computer, 2020.