The Exploring on the University Student Honor Management System Based on Enterprise Refined Management under the Background of Big Data

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Abstract. Honor management is one of the routine summative work of colleges and universities. It is related to the vital interests of students and plays an important guiding role in promoting the all-round development of college students and establishing good values. In the new era, the honor management of college students should conform to the characteristics of the big data era, use advanced information technology to improve management efficiency, and strive to achieve refined management goals. Based on the major colleges and universities, this paper aims to explore the improvement plan of college students' honor management based on the fine management of enterprises under the background of big data. It uses literature review method, research method, action research method, object-oriented method and experimental method to analyze. This paper analyzed the current situation of colleges honor work management, summed up the problems existing in the honor management work, and constructed the workflow after the refined management of college students' honor management.

1. Introduction
With the continuous deepening of college reforms, the full implementation of quality education has become the focus of research in colleges and universities. This is an inevitable effort to adapt to the requirements of the times and to adapt to the modernization of socialism with Chinese characteristics. The implementation of quality education is a comprehensive, systematic and complete process [1]. As an important part of quality education, college student honor management system is a scientific and effective education management based on incentive theory, promoting college students' self-growth, comprehensive and healthy development, and then achieving educational goals. Perfecting the effective, scientific and reasonable honor system for college students can better mobilize the initiative of students and make them grow into high-quality talents that are useful to the country and society [2].

Therefore, the honor management of college students in the new era needs to break the traditional barriers to honor management and strive to develop a refined management model characterized by “standard, precise, meticulous and in-depth”.

In recent years, information technology has developed rapidly, and human civilization has entered the era of big data. Its powerful data collection and processing functions have attracted people's attention [3]. In the basic information management of students, most universities in China have
realized informationization. However, in terms of student honor management, Chinese universities lack a corresponding honor system, and few universities have their own honor management system [4]. Therefore, in the process of carrying out student honor management work in colleges and universities, in order to more effectively deal with the huge data scale and increase the value density of data information, it is necessary to build a data sharing platform, increase the application of big data technology, and deepen data mining. Build a personalized honor management model to meet the needs of talent diversification.

2. Current problems in the honor management system of college students

Through the investigation, we found that the university student honor management system currently has the following problems:

2.1. Honor management method is poorly functional
Honor encourages and motivates honour winners by commending excellence, establishing typical models, and introducing experiences, and inspiring other individuals in the organization, ultimately inspiring the entire organization to achieve the specific goals of the organization with high enthusiasm. However, most of the university’s honor management work recognizes that the advanced and motivating functions have not been well played.

2.1.1. The existing honor management system is not universal. Most of the university's honor management system is not perfect in the construction of “standards, organization, and processes”, and the existing honor management system has obvious differences when it meets the different requirements of different institutions in different environments, and it has no universality.

2.1.2. The existing honor review data is more limited. Most of the data involved in the honor review are in a small circle and a small scope, making the evaluation results less objective and less credible.

2.1.3. Existing methods of honor management are not time-sensitive. At present, the honor management system of most colleges and universities still cannot realize real-time data update and real-time tracking of events. It is unable to grasp the dynamic development of students well, neglect the continuity and process of individual development of students, and does not regard the system itself as an educational base.

2.2. Honor management informationization needs to be strengthened
In the context of office automation, the information construction of the honor management system for college students is of great significance for improving the campus office environment and improving office efficiency. However, the informatization construction of the honor management system is still very backward, and many manual operations are used, and the data source is unreliable and the data utilization rate is low.

2.2.1. The manual operation has a high error rate and low efficiency. When colleges and universities carry out honor management work, they often use manual operations to manually enter data into Excel spreadsheets. The problems of large data redundancy and complex docking are common.

2.2.2. The data source is not reliable. When collecting honorary information, the school uses the method of letting students report it themselves. For these data, the school has not taken effective measures to supervise the check. This easily leads to unreliable sources of underlying data, and once there is a problem with the underlying data, it will cause a series of subsequent problems.

2.2.3. The honor data has not been deeply explored. Most colleges and universities deal with honor data, the data utilization rate is low, there is no deep processing of data, and there are widespread data islands and data archiving scope confusion.
3. The exploration based on the refined management of enterprises

Fine management is a process of decomposing and implementing strategies and objectives. It is a management method that minimizes the resources occupied by management and reduces management costs. It is also an important factor to improve the overall execution capability of enterprises. The meticulous development of college students' honor management is to replace the general and fuzzy management requirements with specific and clear quantitative standards, and achieve the refined management objectives of “standard and uniform standards, clear organization and division of labor, simple and clear process”.

3.1. Unify data standards and establish an honor management benchmark

The construction of the honor system data standard is the basic link to build the honor management system, and is also an important basis for the common understanding of honor data and the diagnosis of data errors. The harmonized data standard has prompted the review community to reach a consensus on data standards implementation and database management, to achieve a common understanding of educational data, and to improve the transparency of the honor management platform to collect and store honor data.

3.1.1. Data standard seeking common ground while reserving differences. Through the permission setting, the data standard setting authority is assigned to a specific person in the group, and the data indicators are uniformly set before the review to ensure that the group is transparent and the process is visualized before the review. According to the ladder distribution of the authority of the management personnel, the fineness of the data standard is also stepped, and the target data of the honor system is continuously decomposed and refined, and the low-level management personnel are allowed to develop in a small degree in the process of refinement. The level of individualized development is also set by senior management to replace the general and vague management requirements with specific and clear quantitative standards.

3.1.2. Flexible setting of indicators and weights of each indicator. In different institutions, the talent training objectives are inconsistent. Therefore, when conducting student honor management work, the evaluation indicators selected for each category may be different, or the scores of each category may be different. Based on the above analysis, we have taken into account the needs of different users when constructing the honor management system for college students, so that different users can freely set up the student honor system according to the different professions and grades of the students. The included categories, the indicators of each category and their scores make the evaluation indicators more scientific and reasonable, reflecting the flexibility and versatility of the system, and making the system adaptable to various complex environments.

3.2. Emphasis on organizational linkage, staff authority ladder distribution

The overall planning and unified deployment will enable the students' honor management staff at all levels to cooperate with each other and coordinate with each other to clearly organize the division of labor. It is necessary to ensure that “there are audits for entry and feedback for review”, strengthen the organization management system and establish overall situation. The shared data center enables students to manage the work to achieve high-quality integration of resources and the normalization of core data sharing, avoiding problems such as information silos, data fragmentation, and waste of data resources.

3.2.1. Relevant personnel upload and review student honor information in real time. A special team set up by each school to conduct real-time audits of student honor information. Optimize the work from short-term high-intensity to regular work, real-time data viewing management, reduce manpower consumption, and at the same time structure is rigorous, trustworthiness and execution are strong.
3.2.2. The management staff is hierarchically distributed. A special team set up by each school to conduct real-time audits of student honor information. Optimize the work from short-term high-intensity to regular work, real-time data viewing management, reduce manpower consumption, and at the same time structure is rigorous, trustworthiness and execution are strong.

3.2.3. Relevant personnel perform their duties and interlock with each other to realize information diversion and data sharing. When a new honor record enters the system, it can be diverted according to its own information label, and enter the port of different functional departments, which is specially reviewed by the honorary person in charge. For some basic data, the system can directly provide the basic data platform for sharing by different functional departments. It not only improves the reliability of data sources, but also avoids the waste of human and material resources caused by the authenticity of information verification, which greatly improves the work efficiency.

3.3. Streamline processes and standardize operations

The standardization process is an important prerequisite for ensuring the quality of the system, and determines whether the results of the review are reasonable and fair, and whether the data resources can be used normally. Simplify the process, standardize the operation not only can fully exert the great value of the honor data resources, but also timely discover the problems neglected in the honor management work, and then reflect on the weak links in the honor management, clarify the management responsibility of the staff, and then continuously improve the honor. Various processes of management.

The system systematically stores and maintains student information, honor information and other data, fixed honor management processes, and unified data standards. Honor management may use different data arrangement and arrangement. This system can provide any data item content, no need to repeat statistics and repeat audit. The student honors from the application to the approval, confirms the extra points, from the previous transfer to the certificate, find the data, optimize for a system full coverage, one-stop completion.

4. The exploration based on Big data

In today's era, data-driven education innovation and data-driven education reform have become an unchangeable trend [5]. The blessing of big data can change the traditional decision-making method relying on experience, comprehensively optimize the management resource allocation, stimulate students' interest and passion for learning, and truly improve the efficiency of teaching and learning. In the context of big data, it is not just technical means and decision-making methods. It also requires university management decision-makers and leaders to change management thinking, improve the training mechanism of big data talents, and build a student information big data platform.

The university student honor management system after the infiltration of refined management should conform to the characteristics of the big data era, and carry out data mining from four stages: data collection, data processing, data analysis and data visualization.

![Data mining process](image-url)

Figure 1. Data mining process
4.1. Data collection

Data collection is a prerequisite for mining the value of big data applications, which means comprehensive collection of massive student static data and development dynamic data.

The honor management system for college students mainly involves distributed collection and real-time collection. Distributed collection is a division of labor between computers and data sources distributed in different sites to carry out data sharing and sharing, so as to achieve the purpose of decentralized collection, centralized management and control of data, and to meet the basic data source of university students' honor management system. And the data application port is spread across all major systems. Real-time acquisition Through the Kafka framework, the data is converted into a stream and directly output to the real-time computing framework Storm to participate in real-time analysis. It belongs to the collection and analysis simultaneously, and meets the timeliness requirements of the university student honor management system.

The two acquisition methods complement each other. There are a large number of data transfer, processing and forwarding processes in distributed acquisition, and real-time acquisition can ensure the continuous development of this process; real-time acquisition needs to rely on data update to achieve value, while distributed acquisition provides a large amount of data change environment.

![Diagram of Data Collection Process](image)

Figure 2. Data collection process

4.2. Data processing

Data processing is the storage, retrieval, processing, transformation and transmission of data. Before data processing, noise processing should be performed on the collected data to filter out valuable data and improve data quality. Then, through various connections established by various file systems and database systems for managing data, the data is classified and integrated to meet the data base requirements of different jobs, and the data is converted into information.

4.3. Data analysis

Since the university student honor management system needs to implement a real-time monitoring platform, the data analysis framework adopted should also be oriented to real-time analysis. Through the previous steps, a distributed, fault-tolerant real-time computing system is built. The Storm
framework is used for real-time analysis. It is used in “stream processing” to process messages and update the database in real time, and allocate cluster resources through the Storm framework for calculation. The Storm framework's fault-tolerant, fast, and reliable message processing is a good way to ensure the efficiency and stability of student information.

4.4. Data visualization
Visual analysis mainly uses various algorithms for statistical analysis. The system can integrate and integrate a large number of scattered and diverse data resources. When the user determines the conditions, the system can automatically filter the qualified student information through functions such as fuzzy query, precise inclusion, and custom regular expression [6]. And sorting functions are thus directly synchronized to the database of statistically winning student information. In addition, the system can improve the automation and intelligence of visual model construction through clustering, regression analysis, time series, text mining, collaborative filtering and other algorithms to assist scientific decision-making.

5. Conclusion
This paper collects and integrates the problems commonly found in the honor management of college students at this stage, deeply analyzes the causes of the problems, combines the relevant work experience of major universities, and the investigation and understanding of related work at home and abroad. To ensure that the honor assessment work is fair and just Openly promote the development of the honor management system to the big data platform, this paper put forward the countermeasure of "management of enterprises" and "big data-based" solutions, built a "Big data refined honor management system", and established a big data decision-making model, using big data for scientific decision-making. Deepen the reform of the education and teaching system in colleges and universities, at the same time, the system can provide theoretical and practical guidance for solving the problems existing in the honor management of colleges and universities.

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