

Research on the Innovation of Student Management in Colleges and Universities based on Big Data

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ABSTRACT

Colleges and universities are important bases for cultivating excellent talents, and how to utilize scientific management to comprehensively improve the learning ability, cognitive ability and humanistic literacy of college students is an important issue facing colleges and universities at present. Especially in the big data environment, the thoughts and values of college students are easily swayed by multiculturalism, which poses a serious challenge to management. For this reason, it is necessary to actively explore countermeasures to solve the problem in order to better promote the reform and development of school management, to ensure the quality of school management, and to promote the development of correct values among students. This paper analyzes the problems faced by student management in colleges and universities under the big data environment, and puts forward corresponding countermeasures to these problems.

KEYWORDS

Big Data Era; Student Management; Coping Strategies.

1. INTRODUCTION

Under the rapid development of modern science and technology, the ideology and behavioral tendency of college students are becoming more mature and more receptive to new things, which makes them very sensitive to various social and cultural differences. In the era of big data, although the exchange of students' information has been greatly facilitated, it also makes the processing of data more complicated and poses a serious challenge to the management of students. For this reason, corresponding countermeasures should be taken to accurately grasp the characteristics of students' physical and psychological development in the big data environment, and to utilize scientific management tools to promote students' healthy growth in accordance with the purpose of their moral education.

2. THE NECESSITY OF BIG DATA TECHNOLOGY TO CARRY OUT STUDENT MANAGEMENT IN COLLEGES AND UNIVERSITIES

(1) Improvement in the level of student management by staff

Collecting and organizing all kinds of data occurring in students' study and life is a very important task, and relying on traditional manual data collection, statistics, analysis, transmission and other operations not only reduces the efficiency of the work, but also causes a waste of resources. The use of big data for student management can not only improve the efficiency of data integration, but also ensure the accuracy of the data, provide students with personalized education management services, thus effectively improving the overall level of student management work.

(2) Facilitate communication between staff and students

In instructional management, teachers are expected to receive information from students and to communicate effectively with them. Their traditional methods of communication generally involve face-to-face communication with students, visits, and the production of proposals. Although this enables staff to better access the information they need, it does not adequately integrate and analyze the information, which can adversely affect the work with students. By using big data technology for student management, the advantages of an online communication platform can be maximized, creating a flexible and timely communication platform between teachers and students, allowing staff to obtain all types of student information in a timely, comprehensive and accurate manner.

(3) Effective extraction of student data

With the rapid development and integration of the Internet, artificial intelligence and other technologies, the era of big data has officially arrived. Big data technology applied to student management in colleges and universities can intelligently collect and analyze information related to students' learning and life. On the basis of the real-time data obtained, it can make corresponding adjustments to the management of students and provide targeted guidance to employees to lay a good foundation for the actual situation of students, so as to promote the benign development of university talent cultivation work.

3. THE CHALLENGES OF COLLEGE STUDENT MANAGEMENT IN THE ERA OF BIG DATA

(1) Inadequate management systems

The management responsibilities of university students are very extensive, encompassing a number of functional departments, and the proportion of service functions is increasing. However, there is a lack of communication and dialog between functional departments, which leads to some management work not being carried out in a timely and efficient manner. In the era of big data, the management of colleges and universities requires the collaboration of all functional departments to realize the sharing of information and resources, so as to improve the management efficiency of colleges and universities. However, at present, the responsibilities of some colleges and universities are not clearly delineated between the functional departments, and the relevant regulations for the management of colleges and universities are not perfect, resulting in lagging behind in the management of colleges and universities. Although many colleges and universities have taken a variety of reform measures, but in the context of big data, the student management system of colleges and universities need to be constantly improved in order to ensure that colleges and universities are efficient and high quality.

(2) Insufficient management experience

In the context of informationization, colleges and universities adopt the traditional college management mode can no longer meet the realistic needs of college student work in the big data environment. For example, the traditional college enrollment file management mode, which is paper-based, wastes a lot of manpower and material resources, but also fails to manage it effectively, thus affecting the normal progress of its work. In the context of global integration of the knowledge economy, the foreign exchange and cooperation of colleges and universities is becoming more and more frequent, and the scope of interaction is expanding, which puts forward new requirements for the management of students in colleges and universities. In the context of globalization, cultural exchanges between countries are becoming more and more frequent. It is worth paying attention to the fact that the penetration of western culture shows an increasingly diversified trend, and contemporary college students are increasingly sensitive to foreign thinking and ideas. Some new problems will inevitably arise when Chinese universities engage in cultural exchanges and

discussions with foreign universities, and we should take a prudent and scientific attitude to deal with these problems.

(3) Difficulty in data processing

University informatization is an important guarantee for the sustainable development of universities and cannot be separated from the support of all aspects of university management. Especially in the context of big data, people have easier access to data and information. However, as the scale of data increases, the processing difficulty and quality of data are decreasing, producing many useless and destructive data. The openness of network resources makes college students exposed to a huge amount of information, but the cognitive level and values have not yet been established, so it is very difficult to screen this information correctly and effectively. When people are faced with bad information, they tend to produce bad behaviors such as selfishness and gold-digging, which will have a negative impact on the long-term development. The inefficiency and lack of information monitoring and management work in colleges and universities has become a bottleneck that restricts the continuous improvement of the management level of colleges and universities.

(4) Lack of management philosophy

At present, the management of colleges and universities is centered on students' life and studies, however, in reality, colleges and universities are increasingly concerned about the management of students' life, especially a lot of inspections on dormitory hygiene and indiscipline. On the other hand, teachers in colleges and universities lack the concept of data management and cannot provide effective leadership and guidance to students, which leads to the phenomena of skipping classes, deserting classes, playing with cell phones, and so on, which brings difficulties to the management of colleges and universities. In recent years, network security has become a common concern in all walks of life, and there is a general lack of awareness of the security of students' personal information in schools when using big data to manage students.

(5) Weaknesses in the psychological capacity of university students

Modern society is a more complex environment where information such as news and entertainment can be disseminated on a large scale in a very short period of time. As a result of good growing conditions, psychological elasticity is poor and there is a strong desire for expression, which leads to blind worship, extreme behaviors and comparison and showing off, all of which will have a great impact on mental health, which will also bring great pressure on management. Some students fail to achieve the desired results and have a strong sense of competition although they put a lot of effort into their studies. The popularization and development of the Internet has greatly improved the study and life of college students. Obtaining huge amount of information from the Internet has increased students' knowledge and improved their learning ability. However, the network environment is complicated, the quality of information is difficult to control, and it is difficult to manage it effectively. Online games can easily lead to the addiction of college students who do not have strong self-control, which delays their study and seriously affects their physical and mental health. College students have little ability to recognize network information and little awareness of self-protection, which makes them susceptible to fraudulent behavior such as naked loans. Deception can make students suffer significant property losses.

4. COPING STRATEGIES FOR COLLEGE STUDENTS' MANAGEMENT IN THE ERA OF BIG DATA

(1) Sound management system

In recent years, the construction of information technology has made great progress and at the same time ushered in a new era. There are many problems in the current student work system in colleges and universities, among which the internal management system of colleges and universities is

imperfect and lacks authority, and the cooperation between various functional departments is not in place, which causes the quality and efficiency of the internal management work of colleges and universities to be low. To efficiently realize student management in the big data environment, it is necessary to improve the management system of colleges and universities, eliminate the obsolete management system, increase the timely management content, so that the management work can be better carried out, abandon the traditional management ideas, and focus on the management needs of students. It is necessary to formulate management methods in a targeted manner, and make specific regulations on management objectives, implementation rules, etc., in order to guide and constrain the management of colleges and universities, so that the management of the work can be co-ordinated and divided into different tasks, and the management system of colleges and universities can be improved and upgraded in accordance with the laws and regulations. At the same time, it is also necessary to prevent excessive focus on the effectiveness of management, to give full respect for the personality of college students, cultural and practical activities into the management of the management of the real realization of the importance and value of the management of the management of the identity and recognition. At the same time, managers should also have a kind of professionalism to prevent their own ability from affecting the quality of work. If problems are found in the implementation, managers should make corresponding adjustments to ensure its efficient implementation and make it play a positive role in the whole management system.

(2) Enhancing data awareness and optimizing data processing

College administrators should strengthen their understanding of student data collection, ensure the accuracy and timeliness of the data, and provide a basis for the collection of student data. On this basis, they should emphasize the use of various ways to comprehensively grasp the ideological concepts, learning and living status of contemporary college students. When collecting data, a global vision should be used to clarify the characteristics and value of various data in order to carry out the data organization work more effectively. The work of students in colleges and universities is dynamic, and the concept of whole process management should be embodied in the collection of data. In the early stage of university enrollment, it is necessary to take the initiative to collect relevant information to provide a basis for future problem solving. When collecting information, it is necessary to avoid blindness in actual operation according to the actual situation of colleges and universities. Cloud computing is an inevitable trend in the development of the big data era, cloud computing technology can give full play to the respective advantages and characteristics of parallel and distributed computing to achieve rapid processing of massive data at a lower cost. Building a large-scale data sharing pool is an important means to realize real-time data processing, while strengthening the fusion of multi-source data can better explore the deep value of data. By processing and analyzing these data, we can better grasp their life and learning situation as well as their problems, so as to take the most appropriate way to manage them and avoid their negative or negative emotions. In the process of management, we should give full play to the characteristics and advantages of the new media platform, summarize the opinions and views expressed by students on platforms such as Jitterbug, circle of friends and microblogging, and refine and analyze them, so as to improve the technicality of management work.

(3) Improving early warning mechanisms

Due to the limitations of their cognitive ability, college students will have certain psychological barriers when facing unhealthy information. School administrators should establish a sound mental health early warning system to detect students' psychological problems in a timely manner and take targeted preventive and curative measures, so as to avoid the adverse effects on students' life and learning. College administrators use big data analysis methods to extract valuable information from a large amount of information, and screen and clarify it in order to better prevent and control and reduce the harm caused by bad information. Taking college students' schools, majors, genders, etc. as reference variables, categorizing, summarizing and organizing the data can well solve the blindness of some management methods in the past, so as to realize the effect of knowing the autumn by a leaf.

(4) Establishment of an online database platform

The construction of an online database platform not only enriches the ways and means of student management, but also allows real-time management of students, so as to more accurately, timely, and comprehensively record and update the students' archival information, and to achieve the purpose of data sharing. Using this network data platform, it is convenient for students and managers to communicate and exchange information, grasp their thoughts and attitudes in a timely manner, and provide a basis for colleges and universities to make better management decisions. It is necessary to constantly improve and optimize the functions of the platform to help get more help in daily life and study, and to be able to obtain relevant information through electronic products to better understand the direction of their own career development,. This will enhance the ability of self-management. With the database platform, it can also enhance the communication and contact with students' parents, so that they can have a clear understanding of the growth environment, family status, behavioral preferences, etc., and give full play to the advantages of big data information management, establish an all-around teaching model, and continue to promote data-driven management.

(5) Formation of a professional management team

The good or bad construction of the teaching force in colleges and universities is closely related to the quality and level of the teaching force. Strengthening the science, professionalism and rationality of management and reducing the errors of management are the first step to adapt to the requirements of education reform and development in the informationization period and to cultivate high-quality talents in the future. For colleges and universities to develop in a sustainable and high-quality way, it is necessary to have an accurate understanding of college management. To ensure the effectiveness of management work, it is necessary to set up a professional management team, analyze the relevant information about students, clarify the direction of management, understand the interests and hobbies, and use the big data technology to formulate a set of scientific management plan, which requires the school to provide all-around training to the managers through various ways. By hiring experts to teach knowledge and concepts of management, so that managers can better understand and accept, to fully understand the important role of big data in the university's student management work, so that the university's information technology work is truly standardized. At the same time, regular management training can also be achieved through regular management training for university teachers and managers to carry out all-round training, enhance their practical ability and lay the foundation for their application in management work. In addition, the construction of the website and the maintenance of the big data platform is also a highly technical work, which requires the inspection experts of the university, organizing a special team to monitor the operation of the platform and the website in real time, and to discover and deal with the problems in time to ensure the normal management of students.

(6) Strengthening psychological counseling for university students

The university period is an important period for students' physical and mental development. Once college students step into colleges and universities, they will face great pressure from various aspects such as professional learning, interpersonal communication, examination and employment, etc. Under such pressure, they are very easy to be swayed by external or man-made factors, which leads to the emergence of a bad state of mind. Some students have poorer mental elasticity and poorer mental quality, and it is difficult for them to adapt well when facing the problems they encounter in their study and life, thus causing them to be confused and perplexed, and unable to find their own development direction. Through psychological counseling, college and university administrators can better grasp the real situation of college and university students, master their mental health, discover their problems in time, and provide them with targeted counseling. Through psychological counseling, they can better adapt to the development of society in their future studies and careers. To this end, college administrators should enhance their own sense of humanistic care, timely and appropriate psychological counseling for college students, enhance their management initiative, flexibility,

enhance their self-discipline, and promote their overall development. The relevant administrative organs of the university may also employ full-time psychological counselors to evaluate the professional skills and qualities of students before they enter the university, so as to ensure that the students' working ability and the degree of counseling meet the students' requirements.

5. CONCLUSION

Under the big data environment, the management of students in colleges and universities is facing serious challenges and tests. Only by comprehensively understanding, understanding and analyzing the management of colleges and universities can we take corresponding measures to effectively improve the quality of student management in colleges and universities, promote the healthy and sustainable development of colleges and universities, and promote the healthy development of college students and realize their dreams. Building a "big data-driven" teaching model based on big data can help schools better solve new problems in student work. This is also a development trend that is generally recognized by universities.

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