The Optimization Methods of University Education Management in the Era of Big Data

Guosong Chen*

Fuzhou Technology and Business University, Fuzhou 350715, China

*_Corresponding author:_ Guosong Chen, chenguosong1989@163.com

Abstract: With the development of education reform, the work of college education management should be further optimized. Teachers should actively introduce new ideas and methods of education management, to better stimulate the interest of students and teachers to participate in education management activities and improve the effect and quality of education management work. As a popular technical means, big data technology can greatly enrich the content of college education management, broaden the path of management work, and greatly promote the comprehensive level of college education management work. Given this, this paper will analyze the university education management work in the era of big data and put forward some optimization strategies for reference.

Keywords: Big data; Universities and colleges; Educational administration; Optimization

1. Introduction

In the current era, big data technology has become an important auxiliary means to carry out education work. Therefore, when carrying out college education management, importance should be attached to the introduction and application of big data technology, which can greatly improve the efficiency and quality of education management work, so that more new ideas and ways can be formed for education management to improve the effect of management work. In addition to helping teachers further optimize the ways of education management, the introduction of big data technology can also provide a better learning environment for college students, to improve the overall level of education management [1]. Therefore, teachers should keep up with the pace of current times, constantly improve their comprehensive quality and professional skills, try their best to make big data technology play a greater value in education management, and improve the application effect of big data technology in college education management.

2. Analysis of characteristics of college students

2.1. Lack of interest in learning

Compared with junior high school and senior high school students, college students have more free time, and

teachers' management of college students is also relaxed, which leads to many college students spending their energy and time on playing games, entertainment, shopping, and other activities, resulting in their gradual loss of interest in learning, which is extremely unfavorable to their future study and work [2]. In the long run, college students may be distracted in class or skip class, while the teachers become uninterested in teaching, which is not conducive to the formation and development of college students' good learning habits, affecting the development and implementation of college education management.

2.2. Lack of good habits

At present, some college students have not formed high-quality learning habits, which makes them easy to be affected by external factors and difficult for them to actively participate in the study and exploration of corresponding knowledge, greatly hindering the development of education management and is not conducive to improving the education effect [3]. In addition, some college students lack lofty ideals and firm, clear learning goals, so they may have a poor mentality in their daily studies. In the face of some problems or difficulties, many college students will prefer to escape from conflict due to psychological reasons such as lack of motivation. Due to the lack of support for good habits, college students will gradually lose their learning initiative in learning, which will have a great negative impact on the development of college education management.

2.3. Lack of self-control ability

For college students, good self-control ability is an important basis for improving their learning level, which is also an important goal of educational management. However, at present, many college students lack self-control ability, which will easily cause them to lose their ideals and beliefs under the influence of external factors. Especially in the era of big data, many college students will play mobile phones and games all day long, and even some colleges and universities will watch videos in class, which will have a great impact on the development of college education management [4].

3. Analysis of the status quo of college education management

The university education administration itself has strong complexity. As college students come from different regions, their cultures, customs, and living habits are different, which increases the difficulty of college education management to a certain extent, and will have a negative impact on the development of management work in the future. In addition, the communication between teachers and college students is too unidirectional. The factors that affect the quality of college education management include not only teachers but also students' feedback [5]. However, at present, when many colleges and universities carry out education management, they are usually managed by teachers in one direction and lack communication with college students, which will virtually reduce the effect of college education management.

In addition, the comprehensiveness of college education management needs to be strengthened. To improve the effect of college education management, colleges should try to carry out management from different angles and directions and carry out hierarchical education management for college students of different majors and stages. However, in the actual college education management work, many teachers do not understand the actual situation of students, which will increase the difficulty of college education management work [6]. Not only that, in the work of college education management, many problems are not solved timely. In the daily educational management activities, few teachers can solve the educational management problems encountered in time, which will lead to repetitive problems that increase the difficulty of educational management.

4. The optimization value of university education management in the era of big data

In the era of big data, intelligent devices such as computers and tablets have been introduced into the education management of colleges and universities. These devices are small in size and easy to carry. If they are properly applied to the education management of colleges and universities, the effect of education management can be improved to a great extent. In addition, since most college students have been used to using mobile phones and other devices, most of them have the habit of checking their mobile phones at any time, which also makes many notices of education management work be issued in time. College students' dependence on mobile phones can greatly improve the effect of college education management in the era of big data [7]. In addition, when carrying out college education management in the era of big data, teachers can try to change their thinking and further optimize the current working mode of education management. By taking advantage of college students' habit of using WeChat, Weibo, TikTok, and other software, teachers can carry out information-based and data-oriented education management activities for them. This is of great significance for improving the efficiency of college education management in the era of big data.

Through the innovation and optimization of college education management in the era of big data, the quality of education can be further improved, the distance between college students and teachers can be effectively narrowed, and a solid foundation has been laid for the future development of higher-level education management. In addition, many college students are used to using computers, tablets, and other learning and entertainment activities [8]. To this end, colleges can try to use big data technology, Internet technology, and other means to create an online college education management platform, and then share some goals and documents required by education management work with college students, to help them develop good learning habits and promote them to form a correct, positive and upward learning goal, thus improving the quality of college education management in the era of big data.

5. The optimization strategy of college education management in the era of big data
5.1. Optimize the teaching management system and create management characteristics

When carrying out the innovation and optimization of college education management, colleges should not only pay attention to the analysis of college students' learning but also pay attention to daily affairs to avoid the situation of excessive pressure, which will lead to their exhaustion, thus affecting the development of subsequent education management. To this end, colleges can try to introduce big data technology, information technology, and other means into the college education management work, create a more reasonable and scientific education management system, create a more high-quality and unique education management model, and lay a solid foundation for the optimization of college education management in the era of big data [9]. For example, colleges and universities can build an education management website based on big data in combination with the actual situation of their schools, to carry out more reasonable and effective management of college students' personal data and teaching information, which can greatly improve the efficiency of college education management. In the practice of education management, colleges can combine the actual situation of different classes, further optimize the current model and system of education management, and integrate class resource sharing, psychological quality monitoring, and other contents, which can greatly improve the characteristics of education management.

After the end of each exam, teachers can use the education management system based on big data to manage the exam scores of college students and share the results with the college students. They can also combine the actual situation to better calculate the average scores of college students in each subject. In this way, the effect of college education management can be greatly improved, and a new basis for the subsequent

development of education management work can be provided [10]. In addition, the teachers can also combine these data information to explore and analyze the actual learning situation of college students, formulate a more reasonable and scientific goal for them, and improve the effect of education management work.

5.2. Establish an online communication platform to keep close contact with the family and school

To further improve the effect of college education management, teachers should actively get in touch with the parents of college students, to provide support for education management from the family level. In the past work of college education management, few teachers would carry out in-depth and timely communication with parents of college students, which would make it difficult for family education resources to enter the classroom, which is not conducive to improving the comprehensiveness of college education management. Therefore, colleges can try to combine big data technology to build an online communication platform, which can not only provide convenience for college students and teachers but also encourage parents to participate in education management activities. In combination with the platform, parents can not only check college students' test scores, daily performance in school, and homework completion but also understand teachers' evaluation of college students [11]. In this way, parents can greatly improve their understanding of college students, which will greatly promote their participation in education management. In addition, teachers can also regularly carry out online communication and exchange with parents of college students, to help them have a deeper and more comprehensive understanding of their children's ideas, living conditions, learning, and so on, which can also enhance teachers' grasp of students' conditions, thus laying a solid foundation for the future development of college education management.

5.3. Improve the professional quality of teachers and improve the level of management

In the era of big data, information and big data technology have gradually gained popularity in college education management. To further improve the effect of education management, teachers must pay attention to the innovation and optimization of their own quality and professional knowledge, to better adapt to the innovation and development trend of college education management in the era of big data. To this end, teachers should take the initiative to learn some new big data knowledge and innovate their educational management concepts and ideas, to gradually find a management road of their own, thereby highlighting the value of college education management optimization [12]. To further improve the efficiency and quality of college education management, colleges need to carry out analysis and improvement from different angles. First of all, colleges should try to communicate with relevant experts and teachers of big data, to continuously improve their professional ability and quality. Secondly, colleges can use Internet technology to inquire about more theories, methods, and models related to college education management, and then can combine big data with college education management according to the actual situation of the university, to find a college education management model that meets the actual needs of the university [13]. Not only that, colleges can also try to combine big data technology and Internet technology to communicate with teachers in other colleges and universities, to better discover the problems in their education management work and find better answers to solve the current problems. By carrying out such measures, the professional quality of teachers and the comprehensive level of big data will be further improved, which is of great significance to improving the effect of college education management in the era of big data.

5.4. Improve management quality with the help of instant communication tools

In the era of big data, college student's daily life and study are closely connected with mobile phones, forming

an inseparable bond. With the continuous expansion of the functions of smartphones, college students are using various communication software to communicate more and more frequently. This software not only provides a platform for college students to solve their learning problems but also becomes an important channel for them to share their daily life, such as movies, music, games, pictures, and so on, which effectively narrows the distance between college students [14].

As a key tool and means for college students to obtain external information, mobile phones have been widely used for their interactive and information exchange functions, among which instant messaging is particularly prominent. The current popular communication tools, such as WeChat and QQ, play a significant role in improving the effect of college education management. When carrying out college students' education management, colleges should make full use of instant communication tools to establish more timely and efficient communication channels with them. This will help them to grasp the ideological dynamics of college students more comprehensively, and provide solid support for the optimization of subsequent education management work [15]. Therefore, colleges need to deeply understand and master the expression ways and characteristics of communication software such as text and voice messages, to achieve more effective communication with college students. In this way, colleges can stimulate college students' enthusiasm for learning, cultivate good learning habits, and promote their healthy physical and mental development.

6. Conclusion

To sum up, if colleges want to improve the level of college education management in the era of big data, colleges can build an education management system as the following. Colleges can create an online communication platform to keep close contact with the family and school, improve teachers' professional quality and management level, and improve management quality and other levels of analysis with the help of instant communication tools, to virtually promote the quality of college education management in the era of big data to a new height.

Disclosure statement

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