Research on Teaching Management Informatization in Higher Vocational Colleges in Big Data Age

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Abstract: With the emergence of the current big data era in our country, all kinds of big data technologies are applied in the field of education. In higher vocational colleges, as the base of talent training, higher vocational colleges should update the teaching management mode and management means effectively according to the development of the current big data era, so as to highlight the advantages of teaching management in higher vocational colleges.

1. Introduction

In order to ensure that big data technology can play its due value and effect in the teaching management mode of higher vocational colleges, the relevant managers should find out the problems existing in the traditional teaching management mode in time, and constantly improve their own information technology management level, integrate the big data technology into the teaching management mode of higher vocational colleges, so as to effectively solve the problems existing in practice, and improve the teaching management effect and efficiency of higher vocational colleges as a whole.

2. Characteristics of Teaching Informatization Management in Higher Vocational Colleges in Big Data

2.1. Fragmentation of Data Information

In the era of big data, with the increasing of relevant information types and quantities, it is difficult for some data to be classified and sorted effectively, which leads to the fragmentation of some data information, which not only brings many changes to the field of education in our country, but also makes the teaching information sources in higher vocational colleges diversified, which
brings many obstacles to the actual work of the staff. Some of the data information is from teachers, but also some is from scientific research teams, these information according to their own source changes show different characteristics and characteristics, so that the current higher vocational college teaching management information towards a diversified direction, some practical work is difficult to carry out in an orderly manner.

2.2. Sustainability of Data Information

In the era of big data, the information in the teaching management mode of higher vocational colleges gradually present the characteristics of continuity, which is the main feature in the teaching management mode of higher vocational colleges. Because the relevant information collection and processing of the relevant management personnel in the construction of the teaching management information system of higher vocational colleges is a gradual process, and the whole working time is also relatively long, for some higher vocational colleges, even the advanced information technology processing means have not been introduced, which leads to the confusion of some staff when they are faced with many changes in their actual work, the whole construction information process is a long-term project. In the background of big data, some managers have gradually transformed their own management model into the analysis of short-term data, and the analysis of short-term data is not only difficult to meet the needs of teaching management in higher vocational colleges, but also cannot improve the scientific nature and rationality of data processing.

![Teaching management](image)

Figure 2 Teaching management

3. The Problem of Teaching Management Informatization in Higher Vocational Colleges in Big Data Era

3.1. The Deficiency of Teaching Management Software

At present, most higher vocational colleges have many shortcomings in the construction of teaching management software in the process of information construction of teaching management system. The teaching management software they have at present is very difficult to meet the actual demand. In addition, some teachers need to introduce advanced information to students according to the course demand in the process of teaching in higher vocational colleges. However, the software used in the teaching management mode of higher vocational colleges has certain lag, which leads to some teachers unable to obtain the latest teaching resources, which has very serious consequences to the actual teaching.[1]. In addition, although some higher vocational colleges lack the funds to introduce advanced information technology, the managers of relevant higher vocational colleges can also hire some experts in the society to construct a more perfect teaching management model according to the current teaching management needs of higher vocational colleges. However, some leaders of higher vocational colleges do not realize the role and importance of information construction of teaching management in higher vocational colleges, which is still insufficient in software development and construction. Some students can not use the current teaching management software to inquire their own information in higher vocational colleges, which seriously affects the improvement of teaching management level in higher vocational colleges.
3.2. The Role of Teachers is Not Obvious

In the process of teaching management information construction, higher vocational colleges should employ some professional talents to optimize and improve the original teaching management mode effectively. However, from the current teaching staff of higher vocational colleges, some teachers lack more perfect information technology processing ability and can not integrate information technology into the teaching management mode of higher vocational colleges. At the same time, higher vocational colleges should strengthen the training activities of teachers in the process of teaching management mode construction, but in the process of running a school in practice, some school leaders did not carry out relevant training activities to train teachers' information technology level, which seriously affected the effect of teaching management information construction in higher vocational colleges. Some school teaching managers in the actual work, because of the lack of relatively perfect information technology literacy, so in the actual work can not be comprehensive integration of relevant data and risks, these factors have a serious impact on the actual teaching and management work.

4. Under the Big Data Era, the Teaching Management Information Construction Strategy of Higher Vocational Colleges

4.1. Strengthening the Attention of Teaching Management Informatization

In the era of big data, in the process of teaching management information construction, in order to improve the effect of information teaching management mode as a whole, the relevant school leaders should pay more attention to the information construction of teaching management, set up relevant organizations on the basis of the original teaching management mode to improve the traditional teaching management mode constantly, and integrate the current advanced information technology into the higher vocational teaching management mode[2]. When constructing the teaching management mode, the relevant managers should integrate the relevant theories and cloud computing technology in the big data era into the teaching management system of higher vocational colleges, and the relevant managers should strengthen the contact with each department, so that the managers of each department can actively participate in the information teaching management construction of higher vocational colleges in the big data era. At the same time, the relevant management personnel should strengthen the planning of the information construction according to the current needs of the higher vocational colleges for the information construction of teaching management, and clearly introduce the equipment and the type of information technology, so as to ensure the orderly progress of the follow-up information construction. At the same time, relevant supervision departments should be set up in higher vocational colleges to supervise the whole process of teaching management information construction in higher vocational colleges, so as to ensure the orderly construction of teaching management information construction in higher vocational colleges in the era of big data.
4.2. Improving the Information Construction Mechanism of Teaching Management

The application of teaching management system can not only bring about the reform of college teaching management method, but also the reform of traditional teaching management idea and means. The informatization of teaching management promotes the development of teaching management in colleges to the direction of digitization, paperless and intelligent, saving a lot of manpower, financial and material resources in management, optimizing teaching style and style of study, and promoting the continuous improvement of the quality of talent training in colleges.

In the process of teaching management information construction, higher vocational colleges should also establish a relatively perfect management mechanism, in the formulation of management mechanism should focus on improving the participation of all staff to carry out the relevant mechanism construction, in the actual work should strengthen the teachers and students of higher vocational colleges to pay more attention to the teaching management information construction, promote the construction of teaching management information in higher vocational colleges as a whole, classify and process the relevant teaching information and advanced teaching means, and make scientific and rational use in the actual teaching, at the same time, strengthen the overall communication of information management. According to the type of teaching management information construction in higher vocational colleges, the related management business is divided, and the related data information is unified and integrated, and the collected information is collected and shared in a unified format[3]. In the process of teaching management information construction in higher vocational colleges, the relevant leaders should also strengthen the communication and communication with the superior departments, so that the advanced teaching content can be introduced into the higher vocational colleges.

4.3. Improving the Practicality of Information Construction of Teaching Management

Under the background of big data, the university administrators should innovate and improve the original management mode effectively in the process of teaching management information construction, for example, for the university laboratory, we should highlight the individual development of the university laboratory, formulate more detailed guidelines for the use of the university laboratory, and make relevant strategies according to the actual situation of the laboratory, so that each student can make full use of the resources in the laboratory to study. At the same time, the university administrators should make use of the cloud service platform to provide students with online shared resources according to the current learning needs, Relevant managers should also strengthen the development of learning software in this software, students' overall learning situation and learning track comprehensive records, and then the students' track of all-round collection, so as to facilitate the higher vocational college managers to understand the current learning trends and students in the process of using the problems encountered. The management personnel should develop the big data technology deeply, combine the university education personnel to carry on the effective excavation to the information teaching management pattern, fully understand the teaching management information value, only then can guarantee the teacher to carry on the follow-up teaching activity in an orderly manner. For example, such an interface can be set in a computer terminal:

5. Conclusions

In the process of information construction of teaching management in higher vocational colleges in the era of big data, we should improve the information management level of higher vocational colleges as a whole, innovate the teaching methods and information teaching mode effectively according to the present situation of teaching management mode in higher vocational colleges, introduce advanced big data processing technology on the basis of improving the traditional teaching management mode, and improve the quality and level of teaching management in higher vocational colleges as a whole.
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