

A Brief Analysis of Educational Innovation and Reform in Colleges and Universities under the Situation of Big Data

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Abstract: In recent years, with the in-depth development and extensive application of information technology in all walks of life, university education has entered the era of big data. Big data began to enter social and economic life, and soon became a research hotspot. In the national medium - and long-term education reform and development plan promulgated in recent years, students should pay attention to the different characteristics and personalities of students. However, in the field of university education in China, the mechanism of unified education still dominates. In the practice of individualized education reform for college students, there are still many complicated problems to be solved.

The meaning of education in the era of big data

Big data will bring about significant changes in education, research, teaching management and even personal career development, and have a profound impact.

In the era of big data, sharing educational resources is more convenient. Big data categories include pictures, video, streaming media, etc. In recent years, online education has become a popular way of teaching and has gradually become a teaching method accepted by people outside the classroom. For example, the national premium online course is a form of online education based on big data technology. Based on the online course teaching, students can choose the course content according to their individual needs and abilities, which is not limited by time and space. Based on big data, it can sort out and analyze its habit characteristics, interests and hobbies and study results in stages, develop appropriate learning plans, and enhance students' autonomous learning ability and personalized learning ability.

Big data is conducive to the improvement of teaching quality. Big data is a new technology with the development of modern science and technology. In the current education and information construction of many universities, big data technology has been applied to the construction and development of its industry. Through the investigation of the current situation of education management informatization in China, it is found that the integration of big data technology has been realized in the construction and development of many universities.

With the support of big data, teacher-student interaction is more convenient. The application support platform of information technology and the effective use of corresponding learning tools make the interaction between teachers and students more rapid, and teachers and students can communicate and interact freely. The multi-resource management and multi-function application support platform of information management teaching provides basic support conditions for teacher-student interaction. Multimedia micro-course, courseware, mathematics textbook, various question bank system, dynamic teaching data and educational and teaching management information resources provide a variety of application platforms for classroom learning and resource management. The use of learning tools mainly includes working platform, statistical analysis, push of learning resources, communication tools and third-party apps. Information-based teaching services support media to provide an effective communication environment for information-based classroom teaching.

The era of big data brings more opportunities to college education

Big data transforms the object of education into an Internet community. With the advent of the era of big data, Internet community has begun to attract the attention of college students. The community in the Internet age is created or formed spontaneously according to different needs of motivation. College students are active in thinking and being curious about new things, and are active participants in the Internet community. Different communities have different positioning and attributes. Around us, the main ones are product-based, interest-based, brand-based, knowledge-based, tool-based, and so on. Knowledgeable college students are a knowledge-based community. Cohesion is based on people's interests and communication needs, not formal job responsibilities. The traditional method of ideological and political education lacks good interaction with the educational objects, and students' knowledge input is always relatively passive. It is a feasible plan for the reform of ideological and political education to make use of the Internet community model, establish relevant communities, fully mobilize the enthusiasm of college students to participate, and highlight the dominant position of college students.

Big data transforms education subjects into education stars. With the increasing micro-distribution of ideological and political education, the form of knowledge dissemination will continue to be optimized. With the help of the Internet communication platform, the function of teacher education is no longer limited to the traditional classroom, but online teaching. In the future society, the emergence of online courses will impact and change the profession of teachers. In the United States, the craze for online education is making teachers "stars" through education. Ideological and political education can also learn from foreign experience and cultivate a group of education stars, which will produce unimaginable "fan benefits". The traditional higher education gives the university student the boring feeling, the university student to teacher's enthusiasm is not high. To be specific, some college students even resist the theory course of ideological and political education. If big data technology is applied, teachers will become education stars and attract students' attention, which will fully mobilize students' enthusiasm for participation and generate fan economy.

In the era of big data, college education still faces many challenges

At present, college education lacks the ability to analyze and integrate information, and the fragmentation of data information does not play a good role in information technology. And easy to make public.

Big data information technology can not play a good role in promoting entrepreneurship education. In recent years, in order to comply with the development of big data information technology, education informatization has officially become an important direction for the country to promote education reform and development. Although enterprises in big data environment have a lot of information, such as industry information and frontier market dynamics, it is still subjective to some extent. At present, college education lacks the ability to analyze and integrate such information, and the fragmentation of data information seriously restricts the pertinence and foresight of college education. Therefore, the quality and availability of information resources for entrepreneurship education are still relatively low, unable to promote the role of big data information technology in entrepreneurship education.

The problem of privacy exposure under big data is serious. Although big data has brought convenience to our lives, there are still many potential dangers, and privacy leakage has always been the main problem that the public believes exists. With the popularization of personal cell phones and personal computers in China, it is obvious that the Internet has become an indispensable part of our life. When we use the Internet, the content and records of our visits on major websites are leaked under the big data. Just as we expose our privacy, the Internet now knows us better than we do, although we can give us better experiences in every way and make our lives easier.

In the era of big data, the education mode of colleges and universities needs reform and innovation

The advent of the era of big data has its advantages and disadvantages for college education. We have to do something.

Big data technology should be integrated into the traditional teaching model. Starting from the innovative teaching model, explore the potential education rules in the big data environment, help students introduce the concept of big data and enhance their insights, and break the situation that university education is only limited to theoretical analysis and policy. By establishing courses and practical links based on big data application, they consciously use the Internet and big data services to cultivate students' big data thinking and innovation ability through case studies.

The sharing of information resources should be strengthened to make the decision of teaching management more scientific. The development of educational informationization in China is inseparable from the exchange and sharing of information resources. Therefore, colleges and universities should strengthen the exchange and communication of information resources inside and outside the campus, build a scientific and comprehensive education information service platform and realize the information resource sharing of innovation and entrepreneurship by relying on big data technology and virtual reality technology. College education. At the same time, universities can use big data analysis technology to develop a complete and detailed monitoring index and evaluation system from four aspects including curriculum, teachers, funds and platforms, and use big data information mining and analysis methods. Eliminate all kinds of monitoring data. Trend judgment and planning to establish a general university innovation and entrepreneurship education database to make teaching management decisions more scientific.

It is beneficial to evaluate and analyze the interaction between teachers and students. Teaching interaction analysis based on big data of information classroom can accurately grasp the knowledge and classroom behavior needs of each learner, so that the information-based classroom can carry out personalized teaching ability according to their own needs. Education can be changed from group education to individual education. According to these needs, teachers should personally promote classroom learning materials, focus on students' interactive learning, and focus on "one-to-one" information and personalized teaching. Teachers can classify students' knowledge needs according to the rich information classroom multimedia resources, and push learning materials selectively according to the learning needs of learners at different levels, so as to meet the differentiated learning needs of learners and help students improve their learning level.

Solve technical problems related to big data. In order to improve the construction of network security under the influence of the era of big data, colleges and universities should adopt new standards for the era of big data, requiring campus construction based on information, so as to improve the campus network. But at the same time, teachers should pay attention to the teaching loopholes in the education and teaching process. Colleges and universities should timely correct and prevent network security protection, and take information leakage as the main purpose of prevention to avoid occurrence. At the same time, real-time monitoring of the information network environment, the network monitoring system to implement the system vulnerability repair measures to prevent system vulnerabilities, some campus website errors should be timely repair. The main purpose of establishing network security is to maintain data security and provide better protection. While you can fix broken devices and bugs, you can't completely fix lost data. Since the university network includes the personal information of all teachers and students, it is necessary to further strengthen the security of the university's internal network management server.

Only when college education adapts to the era of big data can it enter a new stage of development

The era of big data has both advantages and disadvantages for college education. Big data enables education to be transferred from big individuals to small individuals, thus providing more possibilities for education. A teacher should have a deeper understanding of the students' thoughts.

Be able to fully grasp the dynamics and forestall them. Therefore, we must adapt to this era and adapt to the difficulties and requirements that big data brings to the work of educators. We should also enjoy the convenience and development brought by the era of big data and make use of big data. Continuous learning and deep understanding can innovate education and enter a new stage of development.

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