

Exploring the Path of Innovation and Entrepreneurship Education in Universities under the Background of Big Data and Constructing Ideas

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Abstract:

With the advent of the Internet era, people's study, work and life have undergone tremendous changes. Therefore, when carrying out innovation and entrepreneurship education, universities need to actively adapt to the current era environment, introduce big data technology into educational work, improve the quality and pertinence of innovation and entrepreneurship education through the exploration of the application functions of big data technology, and cultivate more outstanding talents for society. This article aims to provide some reference for relevant educators through in-depth research on the path of innovation and entrepreneurship education in universities under the background of big data.

Keywords:

Big Data, Universities, Innovation and Entrepreneurship Education

1. Introduction

With the continuous development of the economy and society, modern technology has gradually been widely applied in various industries, and the education industry is no exception. Therefore, in the process of carrying out innovation and entrepreneurship education in universities, schools need to keep up with the pace of the times, deeply integrate big data with educational work, give new vitality and vigor to educational work, improve the quality of education, and enable students to effectively cultivate their innovation and entrepreneurship abilities, providing strong talent support and guarantee for the construction and development of the country.

2. The Significance of Innovation and Entrepreneurship Education in Universities Under the Background of Big Data

2.1. Beneficial for the implementation of national strategies

With the continuous development of modern technology, the application of big data in various industries has become increasingly widespread and has gradually become an indispensable part of it. Therefore, China can coordinate and plan the development of big data technology through the introduction of strategic policies, so that it can play its due technological advantages in social construction and promote high-quality development of the national economy. In carrying out daily educational and teaching work, higher education institutions need to keep up with the development trend of the times, actively respond to and implement national strategies, increase attention to innovation and entrepreneurship education, and cultivate high-quality and high-level innovative applied talents for society. At the same time, big data should be introduced to improve the quality of innovation and entrepreneurship education, enabling students to possess good digital literacy and adapt to the complex environment of the future.

2.2. Beneficial for leveraging the advantages of higher education institutions

In the context of the new era, higher education institutions need to combine the requirements of the new curriculum standards, leverage their own educational advantages, and provide educational service functions to cultivate outstanding talents with strong comprehensive qualities and abilities for society, so that the social economy can achieve high-quality and rapid development with the strong support of human and intellectual resources. In the actual implementation of innovation and entrepreneurship education, universities can use big data technology to collect, organize, and analyze industry data. By accurately predicting the current industry market development trends, adjusting course content, optimizing course organization, and making education more quality and effective. During this period, universities can also strengthen communication and collaboration with local excellent enterprises with the strong support of big data. By effectively utilizing enterprise resources and leveraging the school's educational advantages, students can quickly adapt to the job environment of enterprises after graduation, thereby promoting the good development of enterprises and driving the growth of regional economic benefits.

2.3. Beneficial for alleviating students' employment pressure

With the increasingly severe employment environment, innovation and entrepreneurship education has gradually received attention from society and schools. By cultivating students' innovative spirit and entrepreneurial ability, students can have more choices after graduation, thereby alleviating the employment pressure on college students. In this process, universities can use big data technology to objectively, comprehensively, and accurately evaluate students' learning status and performance, provide professional employment consulting and entrepreneurship guidance for students, and enable students to successfully start businesses based on this, thereby driving employment and stimulating the prosperity and development of the job market.

2.4. Beneficial for optimizing the allocation of educational resources

When carrying out innovation and entrepreneurship education, universities can use the introduction of modern technology and big data technology to allocate and utilize educational resources reasonably, so as to fully utilize resources and promote the improvement of educational quality and effectiveness. Specifically, universities can use big data technology to collect, integrate, and analyze various data, understand

students' learning situations, classroom teaching implementation effects, industry talent requirements, etc., in order to establish appropriate professional courses and avoid unnecessary waste of resources. For schools, simply providing theoretical teaching to students is far from enough. Practical teaching is also needed to provide students with opportunities for practical operation and training, so that they can master professional knowledge and skills through personal experience, meet the requirements of social talent, and achieve the goals of innovation and entrepreneurship education. In this regard, schools need to strengthen digital construction, continuously update and upgrade infrastructure and equipment, in order to provide technical support for practical teaching, improve the pertinence and effectiveness of practical teaching, and make full and reasonable use of practical teaching resources.

3. Analysis of the Current Situation of Innovation and Entrepreneurship Education in Universities under the Background of Big Data

3.1. Lack of big data thinking

In the new era, universities need to keep up with the times and recognize the advantages of big data technology in innovation and entrepreneurship education. Through in-depth analysis and processing of massive data, they can provide powerful data support for educational work, thereby improving the effectiveness and efficiency of education. However, from the actual situation, many universities lack big data thinking and still adopt traditional educational ideas, believing that teachers only need to complete educational tasks step by step based on their own experience, ignoring the changes of the current era and the diverse development needs of students, resulting in the value of data not being displayed and hindering the further development of innovation and entrepreneurship education.

3.2. There are information barriers present

When carrying out innovation and entrepreneurship education, colleges and universities need to adapt to the current Internet era, actively introduce modern science and technology, and through the close combination of big data technology and education work, break the previous time and space constraints, so that information can be quickly circulated and shared in real time, thus improving the utilization rate of information resources. But in fact, many universities have the phenomenon of "information silos". The reason why there are barriers between data is mainly due to the lack of communication and exchange among departments within the school, making it difficult for data to be effectively transmitted between departments. At the same time, different departments do not follow a unified format standard when recording and storing data, making it difficult to transmit data and quickly and timely organize and summarize various data together, which in turn affects the efficiency of data analysis and processing results, leading to a lack of reliable data support for innovation and entrepreneurship education.

3.3. Insufficient data analysis

Nowadays, students in colleges and universities have grown up in the Internet era, so they have been exposed to all kinds of information since childhood. They have very diverse ideas and are easily attracted by new things. However, from the

perspective of the development of innovation and entrepreneurship education in universities, although big data technology is used to collect, integrate, and analyze student data, the value of the data has not been deeply and fully explored, resulting in insufficient understanding of students' learning status, interests, personal characteristics, and other situations by schools. This leads to educational activities that do not match students' development needs and affects their future entrepreneurship. In addition, some teachers of innovation and entrepreneurship education are relatively traditional and still use a single teaching method. Coupled with their lack of digital literacy, it makes it difficult for big data technology to maximize its value in educational work.

3.4. The technology application is not deep enough

In the process of carrying out innovation and entrepreneurship education in universities, teachers can actively introduce big data technology, integrate it into specific teaching processes, leverage technological advantages, and promote the improvement of educational quality and efficiency. However, in reality, many universities are able to use big data technology in education and teaching, but their application is not deep enough. They usually only carry out basic data collection, integration, analysis and other work, lacking in-depth development of its application functions, which makes the advantages of big data technology not fully and completely utilized. For example, big data technology can also provide data support for the design of personalized teaching plans, improve the pertinence and effectiveness of the plans, meet the diverse needs of students, thereby enhancing their learning enthusiasm and initiative, and achieving good results in innovation and entrepreneurship education.

4. The Implementation Path of Innovation and Entrepreneurship Education in Universities under the Background of Big Data

4.1. Innovate traditional concepts and establish big data thinking

When conducting innovation and entrepreneurship education, universities should keep up with the development pace of the big data era, transform traditional ideological concepts, establish big data thinking, and provide strong technical support for the efficient and high-quality development of education work through the full exploration of the value of big data applications, thereby improving teaching quality and effectiveness. In specific practical aspects, universities need to increase internal publicity and regularly organize educational and training activities to impart big data knowledge to relevant faculty and staff, increase their awareness of big data, and actively apply big data technology to practical work, promoting the development of innovation and entrepreneurship education. At the same time, real-life cases can be introduced into training work, allowing teachers to explore and analyze the advantages of big data applications, explore the integration points with innovation and entrepreneurship education, and improve their own application level and optimize the mode and methods of innovation and entrepreneurship education through specific practical operations. When carrying out innovation and entrepreneurship education under the big data thinking mode, teachers need to analyze students' entrepreneurial psychology, understand their true thoughts and needs, based on explaining theoretical knowledge and imparting entrepreneurial skills, in order to improve the pertinence and effectiveness of education. By effectively utilizing big data technology, various

data such as learning progress, test scores, login time, etc. are collected, integrated, and analyzed on online learning platforms. Based on the results of data analysis, flexible adjustments are made to the subsequent teaching plan and content to match the actual learning situation of students, so that students can obtain practical gains and growth, thereby fully demonstrating the value of data and improving the innovation and entrepreneurship education level of universities [1].

4.2. Get rid of the phenomenon of data silos and implement information sharing

When carrying out innovative education and teaching, universities can break down data barriers with the support of big data technology, get rid of the previous “data” island phenomenon, and enable real-time sharing and circulation of data information, thus maximizing the value of data. Firstly, universities need to unify data, record and store data in the same format, eliminate barriers to information transmission between departments, and ensure smooth flow of information. During this process, big data technology can also be utilized for data filtering and analysis to avoid duplication, invalidity, and missing data [2]. Secondly, universities need to strengthen communication and collaboration with external organizations such as enterprises and government agencies, and provide important guidance for the development of education through the integration of on campus and off campus information resources. This will enable innovation and entrepreneurship education to adapt to industry trends and meet the personalized needs of students with reliable and authentic data support. It can be seen that schools not only need to integrate and utilize internal resources, but also collect and obtain rich external data to grasp the development characteristics of innovation and entrepreneurship education, and select appropriate educational methods and means. Thirdly, in the era of information technology, data security management has become increasingly important. Universities need to adopt strict measures to supervise and control the transmission and sharing of information data, protect data security, prevent data leakage, loss or theft, and thus avoid the infringement of students’ privacy.

4.3. Using big data technology to grasp students’ actual needs

In the era of big data, when conducting innovation and entrepreneurship education, universities need to start from the perspective of students and adopt big data technology to collect various data from students, such as attendance rate, speaking frequency, etc. Through in-depth and effective analysis of these data, understand students’ entrepreneurial planning, professional preferences, behavioral patterns, etc., formulate teaching plans that are in line with students’ actual situations, provide personalized entrepreneurship guidance for students, meet their career development needs, and improve the effectiveness of innovation and entrepreneurship education. In this process, universities can also provide accurate portraits of students with the support of advanced technology, establish specialized file databases for students, and accurately grasp students’ thoughts and behavioral states through dynamic monitoring of student data, making educational work more in line with students’ psychology, thereby improving students’ participation enthusiasm and changing their attitude towards innovation and entrepreneurship education [3]. This teaching method is not only conducive to highlighting the role of students as the main body, but also enables them to actively understand knowledge and information related to innovation and entrepreneurship, clarify their own development direction, and then learn efficiently under correct guidance, forming a good innovative spirit and strong entrepreneurial

ability. In the actual process of applying big data technology, universities need to ensure the authenticity and reliability of information. By tracing the source of data information, optimizing and supervising the data analysis process, and improving the scientificity and accuracy of data analysis results, they can provide data support for the efficient and orderly development of innovation and entrepreneurship education.

4.4. Deep application, mining the value of big data technology

In the process of carrying out innovation and entrepreneurship education, universities can explore and explore the application value of big data technology based on specific educational realities, so as to maximize the advantages and benefits of big data in educational work. Therefore, in the practical application of big data technology, universities can not only use it to collect, organize, and analyze data, but also deeply integrate it with innovation and entrepreneurship education, so that it can be integrated into specific educational processes to improve the quality and effectiveness of education. For example, by analyzing and comparing classroom teaching data, the application of situational teaching method, case analysis method, project-based learning method, group cooperation method and other teaching methods can be explored, and the application scenarios of different teaching methods can be clarified, so as to choose suitable methods in innovation and entrepreneurship education and improve the quality of education. Online learning platforms can integrate and compare students' various data, scientifically analyze abnormal data, identify students' weak points and shortcomings in learning, and develop personalized guidance plans for students. With the rapid development of high-tech, big data technology is constantly being optimized. Therefore, universities need to actively pay attention to the development of modern technology, explore new application functions based on the latest achievements, and fully demonstrate the value advantages of big data technology. At the same time, it is necessary to strengthen the construction of information facilities and equipment, and through regular updates and upgrades of software systems, enable relevant personnel to better and more flexibly use big data technology, and improve the utilization efficiency of big data technology.

4.5. Strengthen the construction of the teaching staff and build a professional team

In the era of big data, when conducting innovation and entrepreneurship education, university teachers not only need to have solid theoretical knowledge and teaching abilities, but also need to improve their digital literacy in order to cultivate versatile application talents that meet the needs of social development. Therefore, universities need to attach importance to the construction of their teaching staff. Firstly, schools need to develop scientific and reasonable training programs based on the actual situation and needs of teachers, impart big data knowledge to teachers, enable them to master big data skills, thereby improving their application level and fully utilizing big data technology. Secondly, academic exchange meetings can be organized with sister schools to encourage teachers from various schools to share and exchange experiences, break down teachers' rigid thinking, and enable teachers to have a more comprehensive understanding of big data technology. Once again, we can attract outstanding digital talents with rich knowledge from the outside world, inject fresh blood into the teaching team, and enhance the professionalism of the innovation and entrepreneurship education team [4]. Finally, it is necessary to improve and innovate the performance evaluation system, linking it with incentive, promotion, salary and other mechanisms, stimulating teachers' teaching motivation, and enabling them to

actively explore the application methods and functions of big data technology, thereby improving their overall literacy.

5. Conclusions

In summary, when carrying out innovation and entrepreneurship education, universities need to combine the development characteristics of the current era, transform past educational thinking, establish new modern educational concepts, and actively introduce big data technology to innovate and optimize the mode, content, and methods of educational work, making education more quality and targeted, and providing strong data and technical support for the high-quality development of innovation and entrepreneurship education.

Conflicts of Interest

The author declares that there is no conflict of interest regarding the publication of this article.

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