

Innovative Research on the Talent Training Mechanism for the Integration of Industry, University and Research in Big Data Majors

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Abstract : As a new type of major, big data majors still have corresponding deficiencies in the relevant professional curriculum system and teacher resources. Schools and enterprises need to coordinate and integrate to complete the innovation and creation of the current talent training mechanism. In the process, the school also needs to integrate all resources to complete the structure and improvement of the existing teaching staff, subject curriculum system and other related teaching resources, so as to improve teaching efficiency. This article researches and discusses the innovation of the talent training mechanism of big data professional industry-university-research collaboration integration.

Keywords : Big Data; Specialty; Industry-University-Research; Talent Training

In today's digital and information age, it is of great practical significance for big data majors to realize the synergy of production, education and research. In this process, industry associations, enterprises, schools and government departments need to cooperate and jointly develop corresponding talent training mechanisms. To realize the effective training and creation of relevant professional talents.

1. Analysis of the status quo of the construction of big data majors

1.1 Talent training goals and positioning need to be further clarified

In today's information and network era, all industries need to realize their own development and reform. Big data is a brand-new product in the new era. Both enterprises and individuals will generate a large amount of data in the process of social development. At this stage, most companies regard basic data as an important asset in their development strategy. In order to achieve effective processing and application of data information, companies also need to have a large number of professional talents to realize the collection, classification, statistics, and statistics of data and information. Sorting out, but the related work involves relatively more knowledge and skills. The big data major requires the corresponding industry practitioners to have a solid mathematical foundation and a complete statistical knowledge system. In addition, relevant professionals also need to have a computer science foundation, and they also need to realize the flexible use of knowledge in multiple disciplines. Therefore, it can be seen that in the current Internet age, there is still a huge workload in the training and construction of big data professionals, which can easily lead to schools and teachers lacking clear goals in the process of cultivating talents and unable to quickly find big data. Professional teaching positioning.

1.2 The curriculum system structure is not perfect

The construction of big data majors in my country is still in the initial stage of development, and related majors lack a complete

subject knowledge system, as well as systematic and standardized curriculum education resources. In addition, due to the comprehensive nature of the big data major, it has realized the cross integration of multiple disciplines. In the teaching process, the school needs to consider how to realize the complementary advantages of multiple disciplines to complete the big data professional curriculum system and knowledge system. Construct and build to form a new type of specialty. In addition, in the process of building a big data professional curriculum system, colleges and universities have not fully considered the actual development trends and development needs of the industry and enterprises at the current stage, so that the knowledge and skills that colleges and universities have mastered after completing the education and training of relevant talents It cannot meet the development needs of today's society and the times.

1.3 Lack of teacher resources

As mentioned above, the big data major is an emerging major, and related fields lack a large number of specialized talents. At the same time, colleges and universities also lack sufficient teacher resources in the teaching process. Most colleges and universities and related industries are still exploring in the development process. At the groping stage, both teaching materials and teacher resources are greatly lacking.

2. Innovation of talent training mechanism for the integration of industry, university and research

2.1 Strengthen school-enterprise cooperation

In the new era, if big data majors want to further innovate and optimize the existing talent education work, they must combine internal and external resources to give students more intuitive and profound teaching guidance. In today's environment of integration of industry and education, schools need to actively and effectively cooperate with enterprises to jointly build corresponding practical training bases and complete practical education and training for relevant talents. In this process, the school can carry out R&D and innovation with the enterprise, and jointly complete the innovation and creation of key technologies in related disciplines and related industries. At the same time, the school and the enterprise need to appropriately integrate the modern chemical apprenticeship mechanism in the process of cooperation and exchanges, so that students can. The apprenticeship is dispatched to the company for communication and learning, so as to help students better complete the research and study of relevant big data professional knowledge and theories. And because the big data profession is still in its infancy, schools, enterprises and industry associations should clarify the development trends of related industries and the training standards for related talents, and jointly complete the construction and creation of a modern professional knowledge system and curriculum system.

2.2 Improving the faculty

Big data majors have strong theoretical and practical aspects. Schools should integrate the educational ideas of integration of theory and practice in the teaching process, complete the teaching training for teachers of related professional subjects, and strive to integrate big data. Professional teachers are created as double-qualified teachers. The school also needs to combine the actual teaching characteristics of relevant majors in the process of selecting teachers for big data majors, and complete the construction and creation of relevant teacher teams through the professional curriculum structure formulated in the early stage, and to make up for the school's short time. Due to the lack of internal practical education resources, the school can also hire employees with rich work experience in the enterprise to enter the school to complete the practical education and guidance for students, so as to improve the efficiency of professional teaching.

2.3 Building a professional group of big data

As mentioned earlier, there are relatively many subjects involved in big data majors. The school should integrate the construction ideas of professional groups in the process of creating related majors, such as computer, mathematics, statistics, and management as one type of professional group. Relying on the complementary advantages of the professional group in the teaching process, optimize the teaching management strategy, and realize the further innovation and perfection of the related curriculum system of big data majors. The various disciplines are integrated in the professional group to realize the sharing of teaching resources, so as to maximize the saving of school resources in the teaching process.

2.4 Build a professional curriculum system

In order to realize the collaborative integration of production, education and research, and complete the innovative training of relevant talents for big data majors, the school should complete the construction and creation of the existing curriculum system. In

the relevant curriculum system, the school needs to divide it into three parts, namely majors basic courses, professional core courses and professional elective courses. The basic courses include programming language, data structure, algorithm design, data mining analysis, database management, operating system, stochastic process, conceptual theory and mathematical statistics; And the core courses involve to diversified statistics, data visualization, big data introduction, data science, machine learning, big data processing, analysis, management, distributed systems, and non-relational databases; While the professional elective courses involve cloud computing, artificial intelligence, deep learning, natural science Language processing, basic knowledge of industry applications, etc. Therefore, it can be seen that the curriculum system of the big data major is relatively rich and complete, which involves practical education elements and a large amount of theoretical knowledge. The relevant professional courses include computer, mathematics, and statistics and other related fields. Teachers need to cooperate with industry associations. Exchange and communicate, and complete the construction and creation of the current professional curriculum system with the company to ensure that the relevant professional courses are at the forefront of the times. For example, in combination with the industry association's qualification certification, a series of course resources to help students obtain relevant industry qualification certificates, and the corresponding subject competitions need to be integrated in the course resources. The curriculum structure also needs to incorporate the educational ideas of innovation and entrepreneurship in order to complete the reasonable construction and creation of the current professional subject knowledge system in big data.

2.5 Develop a mature and complete integration agreement

The collaborative integration of industry-university-research in big data majors requires the effective participation of schools, enterprises, and industry associations. To achieve effective synergy and integration among the three, the government should play the role of a communication bridge in the process to ensure that major data majors the main structure can achieve high-efficiency collaboration and cooperation in this process. During this period, government departments should formulate corresponding regulations and policies to clarify the rights, responsibilities, and obligations of schools and enterprises in the process of industry-university-research cooperation. At the same time, schools also need to issue corresponding safeguard policies to increase enterprises' participation in industry-university-research collaboration. The enthusiasm and initiative, for example, combined with appropriate tax reduction strategies, attract a large number of enterprises to participate in it.

3. Conclusion

Generally speaking, in today's digital and information age, colleges and universities should integrate various resources in the process of teaching and training big data majors, and cooperate with industry associations and enterprises in industry, education and research to complete the existing talent training mechanism. Innovate and create, to realize the innovative training of relevant professional talents, and to ensure that the existing teaching and training work has the characteristics of the development of the times and meets the current needs of enterprises and industries for the professional skills and knowledge of relevant talents.

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