

# Exploration and Research on Talent Cultivation for Industry-Education Integration of Big Data Technology in Higher Vocational Colleges and Universities

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**Abstract:** With the rapid development of information technology, big data has become an important force for social progress. Under such a background, the education carried out for big data majors in major universities across the country has become more and more extensive, and in order to improve the quality of education and teaching, the integration of industry and education in big data majors is very necessary, especially the higher vocational colleges and universities, as an important base for cultivating high-end technological talents, are paying more attention to the major of big data technology and application. Therefore, how to effectively train talents so that they can meet the needs of the development of big data industry has become an urgent problem. As an effective talent cultivation mode, the integration of industry and education has shown great potential in the big data technology major of higher vocational colleges and universities. Based on this, this paper will explore and study the talent cultivation of industry-teaching fusion in big data technology majors in higher vocational colleges, with a view to providing reference and guidance for the later development of the work.

**Keywords:** big data, industry-education integration, talent cultivation

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## Introduction

In recent years, China's social and economic development has been rapid, a variety of new technologies, new modes, new business models such as spring, industrial transformation and upgrading, driven by the transformation and upgrading of the talent structure, the structure of talent cultivation in colleges and universities, professional teaching mode also put forward the reform and upgrading of the demand. Big data technology in the latest round of technological and industrial revolution has given rise to new economic patterns, but also accelerated the reform of big data professional teaching in higher vocational colleges and universities.

### 1. Overview of the talent training model of industry-education integration

The deep cooperation between industry and education is the integration of industry and education, which is a mode of cultivating talents to complete the cultivation of talents with higher ability through the cooperation between schools and enterprises. The cooperation between schools and enterprises is the main mode of talent cultivation in the integration of industry and education in higher vocational colleges and universities in the field of big data technology, which is to jointly formulate talent cultivation programme, achieve resource sharing, complement each other's advantages and so on to complete the cultivation of talents<sup>[1]</sup>. This model can cultivate high-quality skilled personnel with practical ability and

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innovation ability in line with market demand.

## **2. Overview of big data talent cultivation in higher education institutions**

Big data is a technological tool that can change the earth into a global village, and the inevitability of its development can be seen by the fact that big data is an emerging technology and the country has adopted it as a new strategic technology for development<sup>[1]</sup>. Especially in the last few years, big data technology has made a lot of contributions to mankind. For example, the outbreak of new coronary pneumonia in 2019 is characterized by its highly contagious nature, and in order to reduce the spread and cut off the transmission pathway, it is necessary to carry out a flow of every suspicious person, but this workload is huge. Because of big data, it reduces a lot of work and improves accuracy for people. Therefore, higher vocational colleges and universities for big data professional talent training must take the very training methods, so that students in the whole process of real mastery of big data technology knowledge, but also be able to combine theoretical knowledge and practice, to promote the absorption and transformation of theory. The integration of industry and education is one of the feasible methods for the training of big data professionals in higher vocational colleges and universities.

## **3. Problems in training talents of big data technology in higher vocational colleges and universities**

Big data has only been around for a decade or so, from being a conceptual word at the beginning to serving mankind today. The real development of big data technology is also in recent years, with the use of smart phones, which makes the breakthrough of big data bigger and more rapid development<sup>[2]</sup>. It is also because of these reasons that lead to the higher vocational colleges and universities to open the big data professional time is relatively short, and there are problems in its big data professional teaching, which are mainly manifested in the following aspects:

### **3.1 The articulation of school-enterprise co-operation is imperfect, and the integration of industry and education is insufficient**

Schools and enterprises cooperate with each other, which is a basic condition necessary for the teaching of higher vocational colleges and universities nowadays. The basic function of higher vocational colleges and universities is to cultivate a group of talents with theoretical basic knowledge and strong hands-on ability, so as to improve the foundation of industrial development and enhance the speed of industrial development. However, some schools and enterprises do not find a suitable mode of cooperation, enterprises are not really involved in teaching, making the integration of industry and education separated, students are not able to apply the theory in practice.

### **3.2 Lack of big data faculty**

After the actual visit and investigation, it was found that today's big data professional teachers in higher vocational colleges and universities are all served by information technology teachers, because the big data technology professional course started in a short time, professional teaching staff has not arrived, thus, it leads to the lack of teachers and the lack of teachers' professional knowledge<sup>[2]</sup>.

### **3.3 Teaching methods are not appropriate and skills training is weakened**

The education and teaching of higher vocational colleges should be formulated according to the basic knowledge ability of their own students, and should not be imitated by other undergraduate colleges. More abilities of students in higher vocational colleges are in practical hands-on and practice. Undergraduate colleges are more concerned with mastering theoretical knowledge and preparing for scientific research, and will not give too much consideration to practice. And if higher vocational colleges also adopt a theory-based approach, it will lead to students' practical skill knowledge being covered, thus degradation and lack of hands-on ability.

## **4. Exploration of industry-education integration talent cultivation of big data technology in**

## **higher vocational colleges and universities**

### **4.1 Reform of the curriculum and teaching content**

Big data technology majors in higher vocational colleges and universities should constantly adjust and optimize the curriculum system and teaching content according to the market demand and the development trend of big data technology. Through cooperation with enterprises and exchanges with the industry, we can jointly formulate talent training programme and introduce the latest technology and application cases into teaching, so that students can master knowledge and skills more quickly and firmly<sup>[3]</sup>. At the same time, the laboratory construction and experimental courses are strengthened to enhance the practical teaching link and improve students' hands-on ability and problem-solving ability.

### **4.2 Strengthening the faculty**

Excellent professional teachers are the basis for guaranteeing the cultivation of talents for industry-teaching integration of big data technology majors in higher vocational colleges and universities, so the school should introduce talents with rich practical experience and industry experience, so as to strengthen the construction of the faculty. At the same time, teachers are encouraged to actually participate in enterprise projects and increase the opportunities for communication and learning with the industry, so as to improve their practical ability and teaching level<sup>[3]</sup>. In addition, expert lectures can be opened to strengthen the communication and exchange of professional and technical communication among students, providing students with richer practical experience and cutting-edge knowledge of the industry.

### **4.3 Practical teaching platform construction**

Practical teaching is the only way between theoretical knowledge and its application, as well as the method of transforming theory into practical skills. Therefore, schools should strengthen the construction of practical teaching platforms and co-operate with enterprises to build laboratories or training bases, so as to provide students with real practical environments and project practice opportunities. At the same time, a sound assessment system should be established to build an assessment card for each student, so as to judge the students' ability to master skills.

### **4.4 School-enterprise and university-industry research co-operation in teaching**

School-enterprise co-operation provides students with theoretical practice, and the combination of industry-university-research allows students to master theories while transforming them into products, which is one of the ways to enhance students' confidence and monitor their skill capabilities. Therefore, schools should actively cooperate with enterprises to carry out joint training, project cooperation, technology transfer and other activities to achieve resource sharing and complement each other's strengths, and transform scientific research results into teaching resources or technological products to promote industrial upgrading and development.

### **4.5 Integration of business tasks into the classroom, simulation of practical teaching classroom system**

The point of teaching is to equip students with theoretical knowledge to lay the foundation for working with big data later on. The significance of practice is to let students apply theoretical knowledge, from paper to hand. In order to strengthen students' mastery of theoretical knowledge, enhance students' practical hands-on ability, but also to be able to make the integration of industry and education higher, the enterprise's actual work tasks are assigned to the school, sent to each group, collaborate with each other, and work together to complete the task<sup>[3]</sup>. Through the form of through projects, stage projects, teaching cases, through the processing and collation of teachers, the theoretical knowledge into the technical application, so that students can complete the learning of theoretical knowledge in the skills application learning.

### **4.6 Reach a verdict**

The training of talents for industry-teaching integration of big data technology majors in higher vocational colleges and universities is a complex and systematic project that requires the joint efforts of schools, enterprises, industries and

other parties. Through the reform of the curriculum system and teaching content, the construction of teachers, the construction of practical teaching platforms, and the combination of school-enterprise cooperation and industry-university-research, the practical ability and innovation ability of students majoring in big data technology can be effectively improved, and high-quality skilled talents in line with the market demand can be cultivated. In the future, higher vocational colleges and universities should continue to deepen the exploration and practice of the talent cultivation mode of industry-teaching integration and make greater contributions to the development of the big data industry.

## **5. Concluding remarks**

Big data is developing in full swing, and it will be one of the assessment indicators for the development of science and technology in the present and future. The breadth, scientificity and efficiency of its application have continuously prompted human beings to research on big data and make progress, so that big data can better serve human beings. Higher vocational colleges and universities should identify the positioning, take skill training as the goal, integrate the practical teaching training mode based on enterprise production, let teachers and students understand the enterprise skill demand in graduation design, school-enterprise cooperation project research and development, and get closer to the enterprise employment standard; take the integration of industry and education as an opportunity to integrate resources, build the experimental base of modern apprenticeship system, school-enterprise collaboration research and development centre, and realize that the entrance and exit of the source of students is strictly in accordance with the standard of the enterprise; Using the real projects of enterprises to disassemble and integrate into teaching project cases suitable for students at all levels to establish a practical teaching curriculum system that integrates theory and practice; taking the enterprise performance management model as the basis, comprehensively considering the talent needs of enterprises, building a practical teaching evaluation system that meets the characteristics of the integration of industry and education; using the opportunity of enterprise cooperation projects to follow the trend of technology, improve the quality of teaching and build a teaching team that has the awareness of the integration of industry and education.

## **Conflicts of interest**

The author declares no conflicts of interest regarding the publication of this paper.

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