

Research and Practice on Ideological and Political Construction of Big Data Major Courses

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Abstract

Curriculum ideological and political education is one of the important ways for higher vocational colleges to implement the fundamental goal of building morality and cultivating people. As an emerging frontier specialty, big data specialty covers a wide range of knowledge and requires high professional comprehensive ability. However, there are many problems in talent training in teaching practice, especially the immature development of Ideological and political education, which seriously affects the quality of talent training. This paper introduces the necessity of ideological and political education, discusses the problems existing in the current ideological and political teaching of big data professional courses, and then puts forward the ideas of curriculum ideological and political construction: by strengthening the training of teachers' ideological and political ability, paying attention to the construction of Ideological and Political Curriculum System and resources, and promoting the reform of teaching mode, we can achieve the training objectives of big data professionals and improve the quality of professional talent training.

Keywords

Curriculum Ideological and Political Education; Higher Vocational Colleges; Teaching Mode; Ideological and Political Resources.

1. Introduction

Chairman Xi stressed at the National University Ideological and Political Work Conference in December 2016, "To make good use of the main channel of classroom teaching, ideological and political theory courses should be strengthened in improvement, enhance the affinity and pertinence of ideological and political education, and meet the needs and expectations of students' growth and development. Other courses should keep a good channel and plant a good field of responsibility, so that all kinds of courses can go hand in hand with ideological and political theory courses and form a synergistic effect" [1-2].

At the Fifth Plenary Session of the 19th CPC Central Committee, it was proposed to "improve the level of social civilization and promote the formation of ideological concepts, spiritual outlook, civilized customs and codes of conduct that meet the requirements of the new era". In many documents issued by the education department, it is also clearly stated that "on the premise of comprehensively exploring the ideological and political education resources contained in professional courses, we should reasonably apply ideological and political resources and give full play to the ideological and political education functions of all professional courses". This also means that the professional curriculum ideological and political work is the inevitable trend of the development of Ideological and political work in colleges and universities in China under the background of the new era [3].

With the continuous improvement and development of big data and cloud computing technology, as well as the growing demand for high-tech application talents in society, higher vocational colleges across the country have applied for big data technology and application

majors in recent years, so as to promote the overall teaching quality and influence of the school through professional construction and development. In 2016, the Ministry of Education officially approved and filed the major of big data technology and application in Higher Vocational Colleges as a new major, and enrollment began in September 2017. After more than three years of professional enrollment and talent training, as of December 2020, 1355 of the more than 1430 higher vocational colleges across the country have been approved to offer majors in big data technology and application, as shown in Table 1. The rapid development of big data technology and application also puts forward higher requirements for the construction of curriculum system, teacher team construction, talent training and other aspects of higher vocational colleges.

Table 1. new big data majors in National Higher Vocational Education

Years	Newly Increased Quantity
2017	64
2018	212
2019	460
2020	619
Total	1355

2. Construction Background

However, at present, there is an imbalance between professional education and ideological and political education in the talent training process of big data major. The main problems are:

2.1. Professional Teachers Have Limited Ability of Ideological and Political Construction, and Teachers Lack a Learning Improvement System

Educators should be educated first, and teachers need to have training experience to improve the teaching ability of Ideological and political education. Professional teachers' ideological and political quality, ideological and political education consciousness and ability vary with different disciplines. Most of the teachers of big data major are from engineering, and their literary literacy, humanistic literacy and ideological and political education ability are relatively weak, which restricts the exertion of the educational function of the curriculum and the implementation of the ideological and political education goals in the teaching of professional courses. Teachers are the key to improve the teaching quality of ideological and political construction in the curriculum. How to make professional teachers competent, good at responsibility, happy to teach and good at teaching when carrying out ideological and political education, have become a major topic in the promotion of Ideological and political education in the curriculum [4]. However, at present, many colleges and universities lack a unified functional department dedicated to improving teachers' ability of "curriculum thinking and politics", and all departments and colleges "go their own way".

From the perspective of colleges and universities as a whole, there is no joint lesson preparation system for teachers of Ideological and political theory courses and professional courses, and few courses ideological and political teaching salons and special training sessions of ideological and political courses classified by disciplines are held. There is a lack of a sound platform for sharing high-quality ideological and political teaching resources inside and outside the school. In a word, colleges and universities have not formed a platform for professional course teachers to learn advanced courses ideological and political training system. Teachers implement what they think is feasible "curriculum ideology and politics" according to their personal understanding, lacking communication and resource integration and sharing. In fact, at present, many colleges and universities have the phenomenon of "two skins" between professional

knowledge teaching and ideological and political education to varying degrees, which fails to form a joint force of education, does not play the educational effect of the curriculum, and cannot form a pattern of education in the same direction.

2.2. The Awareness of Ideological and Political Construction of the Course is Weak, the Learning Content is Boring, and the Constructions of Ideological and Political Resources is Few

At present, big data majors attach importance to the cultivation of practical, innovative and entrepreneurial abilities in talent training, ignore the full play of the ideological and political education function contained in professional courses, and many colleges and universities lack a scientific evaluation system that can mobilize teachers' enthusiasm for curriculum ideological and political construction, which leads to professional teachers' insufficient understanding of curriculum ideological and political construction, not really integrated into it, and a serious lack of energy invested in "preaching". The teaching focus is only on the teaching of "knowledge and skills". Many teachers believe that if students can master professional knowledge and skills, they have completed the teaching task well. They pay more attention to the teaching of theoretical knowledge and the training of application skills, and ignore the correct guidance of students' world outlook, outlook on life and values. For the current social and international hot spots and focus issues, professional teachers can not be well absorbed and applied to professional class teaching. They believe that ideological and political education is the teaching task of Ideological and political theory teachers, and has nothing to do with professional teachers.

The professional basic knowledge of big data covers a wide range, involving the knowledge of mathematics, statistics, computers and other disciplines, and the content is relatively lack of interest. In addition, the professional knowledge and technical learning of relevant courses are difficult, the requirements for practical ability are high, and the knowledge correlation coefficient between courses is large [5]. Therefore, teachers face great challenges in how to better carry out the teaching of related courses of big data major. In addition, due to the short time of Ideological and political construction of professional courses, the ideological and political construction of courses is insufficient and the ideological and political resources are poor. Moreover, the lack of clear teaching objectives of Ideological and political education in talent training goals further leads to insufficient investment in Teachers' Ideological and political construction of courses.

2.3. The Effect of Traditional Ideological and Political Teaching is Poor, and the Teaching Mode Needs to Be Innovated

Traditional teaching focuses on knowledge transmission. Teachers do not pay enough attention to the formation of students' learning ability, learning methods and values. Teachers implement strict control over teaching objectives, contents, methods, processes, results and quality evaluation. Teaching is too procedural and modular. In terms of teaching ideology, traditional classroom teaching is "subjectivism" and "teacher centered", which is based on books, teachers and teaching plans, emphasizing theory over practice, rationality over sensibility, and conclusion over process. "subjectivism" training learning is limited to knowledge impartment and ignores the full development of learning, "among teachers" ignores the due status and rights of learning as a "learning" in teaching. According to the viewpoint of education and Neo Confucianism, no matter what knowledge you learn, you should think clearly about the actual content represented by words, symbols and charts, so as to "live". Such learning is meaningful learning. The learning process of learning and the exploration process of scientists are essentially the same, both of which are the process of discovering, analyzing and solving problems. This process is not only the process of exposing all kinds of questions, difficulties,

obstacles and shields of learning, but also the process of developing learning intelligence, unique personality and creating achievements. The process is very important. The breakthrough of the teaching mode will greatly promote the implementation and promotion of the ideological and political construction of the curriculum.

Therefore, according to the characteristics of all aspects of big data major, this paper deeply analyzes the problems existing in the deep integration of curriculum teaching and ideological and political education, and explores the ways of Ideological and political construction of big data major curriculum based on problem analysis, so as to improve the quality of talent training of this major.

3. Construction Paths

The major of big data technology is to cultivate digital craftsman talents with good professional ethics and engaged in big data and large-scale software work in the new era in the era of big data, Internet + and digital economy in combination with the needs of regional economic development for information talents. The major combines professional teachers, ideological and political teams, senior tutors, enterprise tutors and family members to implement "multi-party linkage and all-round education". It implements "value guidance and all-round education" throughout the whole learning process from freshmen entering school to graduation and leaves school, and implements "three classroom integration and all-round education" with the main line of cultivating students' good "learning behavior career" habits, Form a new mode of ideological and political collaborative education of "multi-party linkage, value guidance, and three classroom integration", and achieve the goal of the all-round development of students' morality, intelligence, physique, art and labor, as shown in Figure 1.

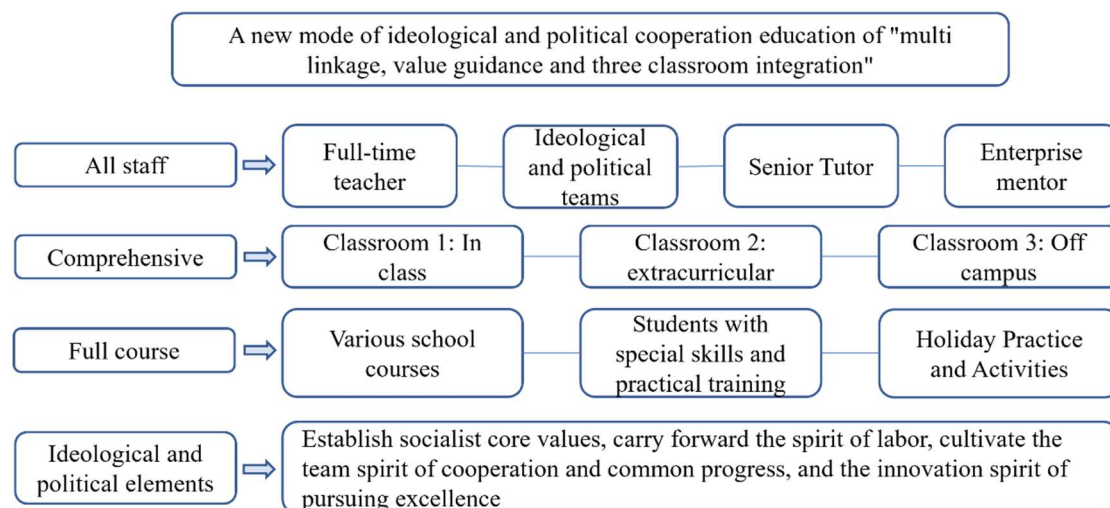


Figure 1. ideological and political collaborative education and training mode of big data technology and Application Specialty

3.1. Strengthen the Training of Ideological and Political Course Construction Ability

Colleges and universities should adopt multi-channel and diversified training methods to improve the curriculum ideological and political construction ability of teachers, especially professional teachers.

(1) Set up teaching teams for ideological and political construction of courses

Give full play to the unity and upward advantage of the teaching and research offices of big data technology, take advantage of the national vocational education teacher teaching innovation

team and national educational reform projects under construction, give full play to the team advantage, establish a teaching team for curriculum ideological and political construction, build school level courses, highlight the central position of educational ability in teacher training, and highlight the core position of curriculum educational quality in Teachers' professional ability, Promote the overall level of school teachers' ideological and political ability in the curriculum to continuously improve.

(2) Carry out ideological and political training for full-time teachers

Carry out special training on ideological and political education for full-time teachers, and evaluate the educational effectiveness of teachers using a variety of teaching methods. The major of big data holds at least one special teaching and research activity of course ideological and political construction every month, and organizes special training of ideological and political construction of courses for new teachers. Promote the majority of teachers to further strengthen the awareness of education, find the right angle of education, improve the ability of education, and ensure that the ideological and political construction of the curriculum is put into the brain and heart, implemented and effective [6].

(3) Continue to carry out political and ideological courses

For courses such as ideological and moral cultivation and legal basis, introduction to Mao Zedong Thought and the theoretical system of socialism with Chinese characteristics, and situation and policy, teachers learn and understand the teaching materials through centralized learning, self-study, discussion and other ways, and invite experts to interpret the teaching objectives, teaching contents, key and difficult points. Through the study of Ideological and political courses, teachers integrate professional teaching with ideological guidance and value guidance, fully tap the ideological and political education resources contained in various professional courses, combine the training objectives and curriculum characteristics of big data technology professionals, solidly carry out curriculum ideological and political practice, and further promote the reform of curriculum ideological and political teaching.

(4) Pay attention to cultivating teachers' ability of Ideological and political research in big data technology courses

Set up a theoretical research team, give full play to the role of full-time and part-time researchers, focus on the teaching practice and theoretical research of curriculum ideological and political construction, explore and innovate the method and path of curriculum ideological and political construction, effectively guide and effectively promote the curriculum ideological and political construction at different levels of Majors and teachers under the guidance of schools and secondary colleges, gather the research force of school curriculum ideological and political construction, and transform the research results of curriculum ideological and political construction into teaching content, Establish a long-term mechanism for scientific research to feed back teaching.

In addition, colleges and universities should also actively build a national, provincial and school level ideological and political education learning network exchange platform to realize the sharing of curriculum ideological and political education resources. Through the sharing of platform resources, expand the channels to improve the professional course teachers' ability of Ideological and political construction.

3.2. Attach Importance to Ideological and Political Curriculum System and Resource Construction

Implement the ideological and political collaborative education project, realize the new cultivation mode of "three integrity education", build a three-stage modular curriculum system of "basic ability training stage, post ability training stage and professional ability training stage" based on the professional work process, and infiltrate the core elements of ideology and politics

such as "socialist core values, labor education, craftsman spirit, vocational school motto and professional ethics" into the professional courses of big data, Students' socialist ideology is deeply cultivated layer by layer by relying on professional courses and practical courses from the beginning education, public basic courses, professional foundation and core courses, professional practice and professional expansion courses, and graduation internship guidance of freshmen after registration. The construction of curriculum ideological and political system based on professional work process is shown in Figure 2.

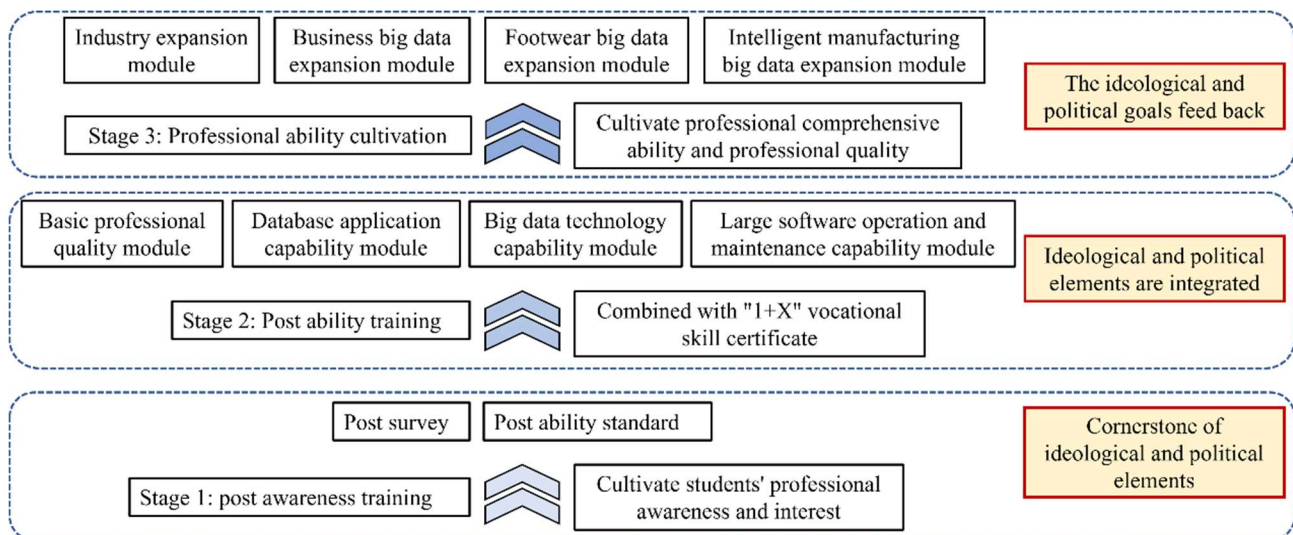


Figure 2. building curriculum ideological and political system based on professional work process

The construction of curriculum ideological and political teaching resources mainly includes the revision of talent training plan, the library of three classroom ideological and political elements, the construction of teaching materials, the construction of curriculum information teaching platform, etc.

(1) Revision of talent training plan

Combined with the characteristics of professional construction, revise the talent training plan, integrate value shaping with knowledge transfer and ability training, establish an education mechanism of combining morality and technology, promote the unity of education and talent cultivation, and build a curriculum ideological and political teaching system that integrates knowledge transfer and value guidance. First, through industry and enterprise research, understand the knowledge, skills and literacy needs of talents in big data technology, and determine the talent training objectives of "Ideological and political education" in this major; Secondly, through the research among colleges and universities, we can understand the reform methods and practice of "curriculum ideological and political education" of professional courses in other colleges and universities, summarize experience, refine the reform methods of "curriculum ideological and political education" of our professional group, and determine the ideological and political education teaching system of talent training in our major; Finally, in combination with the actual situation of the major, revise the talent training plan of "Ideological and political education" for big data technology major. Take ideological and political requirements as the cornerstone of professional ideological and political elements into the training program. The professional quality of big data professional training specifications is shown in Table 2.

Table 2. Professional Quality of Big Data

No	Ideological and political elements
1	Advocating the constitution, abiding by the law, advocating morality and kindness, being honest and trustworthy, respecting life, loving labor, fulfilling moral standards and codes of conduct, and having a sense of social responsibility and social participation
2	Have quality awareness, environmental awareness, safety awareness, digital literacy, craftsmanship, innovative thinking, global vision and market insight
3	Courage to struggle, optimistic, with self-management ability, career planning awareness, strong collective awareness and teamwork spirit
4	Have a healthy physique, psychology and sound personality, master basic sports knowledge and one or two sports skills, develop good fitness and hygiene habits, and good behavior habits
5	Have certain aesthetic and humanistic qualities, and be able to form one or two artistic specialties or hobbies
6	Strong sense of entrepreneurship and innovation

(2) Construction of "Three Classrooms" ideological and political elements database

First, promote professional teachers to carry out the construction of an all-round curriculum ideological and political element library, revise the curriculum teaching documents, mainly including curriculum standards, overall curriculum design and unit design, integrate ideological and political elements through teaching materials, classes, practical training, homework and other links, establish the first classroom ideological and political element library, and play the main role of education. The second is to establish an ideological and political team composed of counselors, class teachers and student cadres, pay attention to the ideological trends of students at any time, further promote liberal action, and establish a second classroom ideological and political element library. The third is to encourage senior tutors to carry out various extracurricular activities under the guidance of professional teachers, teach vocational skills and career planning guided by employment and social needs and professional quality, play a leading and exemplary role, and supplement the ideological and political element library of the second classroom. Fourth, enterprise tutors lead students to participate in the practical training of real projects in enterprises, cultivate students' ability to solve problems and good professional ethics, play a leading role in career, and establish a library of Ideological and political elements in the third classroom. Fifth, family members play an indispensable role in the cultivation of students' personality, which is a strong backing for students' growth and a supplement to the third classroom ideological and political elements library.

(3) Construction of other teaching resources

Relying on the ideological and political elements library, combined with the characteristics of big data professional courses, first of all, through a point to area approach, starting with professional basic courses, first, build high-quality online resources, including teaching short videos, teaching courseware, ideological and political cases with ideological and political elements; Second, according to the offline "curriculum ideological and political" teaching resources that have been built in the curriculum; Secondly, on the one hand, we should strictly select external teaching materials, on the other hand, we should start with the teaching materials compiled by this major, and carry out ideological and political adaptation. The chapters should integrate the contents of "Ideological and political objectives", "Ideological and political development" and "Ideological and political discussion", so as to make the teaching materials ideological and political. Enrich the ways of Ideological and political education and enhance the effect of education.

3.3. Promote the Reform of Ideological and Political Teaching Mode

The major establishes a "professional ideological and political education and research group" to carry out the top-level design of "three complete education", organizes the multi-party

interaction of schools, society and families, carries out the research on the needs of Ideological and political elements of the curriculum, plans the talent training path, and improves the effectiveness of Ideological and political education by innovating teaching methods, reforming the evaluation system, implementing implicit infiltration, and enhancing the effectiveness of Ideological and political education.

(1) Innovation three classroom teaching mode reform

The first class includes public basic courses, professional foundation and core courses, professional development courses, graduation design practice and other curriculum systems. It organically combines quality cultivation with professional teaching, science and technology with humanities, and focuses on cultivating students' learning habits of respecting teachers and themselves, studying and using diligently, being realistic, rigorous, pragmatic and innovative. The second class includes activities such as "early practice and late training", cultivation of gifted students, students' Boya action, innovation and entrepreneurship studios and scientific research activities, various competitions, etc. on the basis of consolidating and cultivating students' good learning habits, it focuses on cultivating students' self-esteem, honesty and trustworthiness, compliance with rules and disciplines, hard-working and frugal behavior habits. The third class, including summer social practice, graduation internship and volunteer activities, allows students to apply what they have learned, serve regional economic and industrial development, understand the development trends of new technologies, pay attention to the new national big data policy, and focus on cultivating students' professional habits of loving their jobs, striving for excellence, working together and pursuing excellence on the basis of consolidating and cultivating students' good learning habits and behavior habits.

(2) Curriculum reform integrating professional work quality

Combined with the characteristics of different types of professional courses, according to the teaching objectives of the courses, reshape the teaching content of professional courses, design curriculum standards, overall teaching design, teaching plans, ideological and political cases and high-quality courseware with "Ideological and political" elements, and implement them into the practice of curriculum construction.

(3) Implement the "Online + offline" hybrid classroom teaching reform

Through the construction of online and offline "Course Ideological and political" teaching resources, we will build a "Online + offline" hybrid "Course Ideological and political" teaching mode of big data technology professional group, carry out "Course Ideological and political" teaching practice, and truly land on the main battlefield of the classroom.

(4) Build a diversified evaluation system of "virtue + talent", "Online + offline", "self-evaluation + mutual evaluation"

Combined with the characteristics of professional courses, we should build a diversified assessment and evaluation system of "virtue + talent", "Online + offline", "self-evaluation + mutual evaluation", and pay more attention to the assessment of students' process and their own quality.

4. Summary

This paper deeply discusses the problems existing in the ideological and political construction of the current big data professional courses, and puts forward corresponding solutions to the problems. The talent training of big data major should adopt the overall design and personalized implementation measures of ideological and political education teaching objectives, comprehensively use knowledge, cases, teacher guidance, environmental edification and other integration methods, and properly integrate various ideological and political education elements such as national feelings, professional ethics, scientific spirit into the

teaching of different professional courses, so as to achieve the educational objectives of knowledge and skills education and ideological and political education.

With the continuous change and development of the background of the times, the ideological and political education work in colleges and universities in China has realized the transformation from the previous theory indoctrination teaching to the way of curriculum ideological and political "moistening things silently" on the premise of fully following the documents and guidance of relevant national departments. As a new technology major in the current information age, the implementation of big data professional courses needs to effectively implement the objectives of Ideological and political education by exploring the knowledge points related to ideological and political teaching content and combining the continuous innovation of teaching methods on the premise of changing the concept of teacher education and the construction of innovative ideological and political teaching staff, Cultivate comprehensive applied talents with high ideological and moral quality and professional skills. Curriculum ideological and political education is an important measure to highlight morality and cultivate people. Under the guidance of the dual concepts of ideological and political education and scientific and technological empowerment, the reconstruction of the existing big data teaching resource system is not only the requirement of the times, but also the only way for the teaching reform of big data majors. As a new major, big data has interdisciplinary integration and technological innovation, aiming to cultivate high-quality composite talents with big data processing and analysis ability to meet the needs of social and economic development.

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