



# Research on the Ideological and Political Teaching Mode of Dual System Curriculum in Colleges and Universities Based on MOOC

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**Abstract.** In order to accurately study the existing application mode of ideological and political education in colleges and universities and cultivate a batch of excellent college graduates, this paper studies the dual system curriculum ideological and political education mode based on MOOC in colleges and universities. With the focus of professional quality training, the basic ideological and political curriculum should be set up and its form should be determined so as to realize the initial orientation of curriculum ideological and political teaching and complete the analysis of the differences between the educational ideas of the dual system of China and Germany. On this basis, the characteristics of Germany's "dual system" ideological and political education mode are analyzed, and the current Germany's "dual system" and domestic universities' ideological and political education mode are perfected by using efficient ideological and political education teaching methods, so as to realize the research on the ideological and political education mode of Chinese and German dual system curriculum based on MOOC. The result of the case study shows that with the application of the teaching mode of ideological and political education in Sino-German dual system, the actual employment rate of college graduates begins to increase, which can effectively meet the practical needs of the society in the application of all-round education talents.

**Keywords:** Sino-German dual system · Curriculum ideology · Teaching mode · Professional quality · Curriculum trend · Graduates · Employment rate

## 1 Introduction

Mu-class is a large-scale open online courses, is the "Internet education" product. Massive Open Online Course is a new model of online course development. MOOC is based on the theory of connectionism and the open pedagogy of e-learning. These courses, like traditional college courses, progressively enable students to grow from beginner to advanced [1]. The scope of the course covers not only a wide range of science and technology disciplines, such as mathematics, statistics, computer science, natural science and engineering, but also social science and humanities. MU courses do not offer credit,

nor do they count towards undergraduate or graduate degrees. Most of the classes are free.

Some of Coursera's courses offer a fee-based service called "Signature Track," which lets you choose whether or not to buy them. You can also take courses with this service for free and get a certificate. A course is not a collection, but rather a way of connecting lecturers and learners from all over the world through a common topic or topic. Although there is usually no specific requirement for the learner, all classes provide a general timetable in the form of weekly discussion topics, and the rest of the class structure is minimal, usually consisting of weekly lectures, discussion questions, and reading suggestions.

The innovation of this paper is that the ideological and political education is a social practice in which the society or social groups exert purposeful, planned and organized influence on its members with certain ideological concepts, political views and moral norms, so that they can form the ideological and moral character that meets the requirements of a certain society. It is also a lifelong learning course in Chinese literature. Ideological and political education is the primary content of China's spiritual civilization construction, and also one of the main ways to solve social contradictions and problems. Ideological and political education is very important, but also very difficult to do, especially in the market economy, China's Ideological and political work is relatively weak, it does not meet the requirements of modern social development [2]. There are many reasons for the ineffectiveness of ideological and political work, but one of the main reasons is that we have neglected personality education and cultivation for a long time.

## **2 Clarification of Educational Concept of Dual System Between China and Germany**

### **2.1 Focusing on the Cultivation of Professional Quality**

In order to study German "dual system" vocational education, we should get rid of its ideological connotation, learn its essence of educational method, and form our own characteristic vocational education idea. First, the core idea of quality education. Quality education is a fundamental and directive problem in school education. Broadly speaking, the goal of quality education in vocational schools includes not only the professional knowledge, skills and professional ethics necessary for engaging in a certain profession, but also the broader goals of political consciousness education, ideological education and ethical and moral education, which are the unity of the elements of the professional outlook, political outlook, world outlook, outlook on life and moral outlook of the people that are pursued and shaped by the quality education in schools, and the interdependence and restriction among the elements, thus forming a complete system with definite aims. This is an interrelated multi-level quality education target system. Among them, the overall goal of quality education determines and restricts the educational goal of each constituent element, and the educational goal of each constituent element, no matter how many levels, is subject to serving the overall goal.

Under the current circumstances, the motivation of quality education should be changed from political function to legal consciousness, from political function to economic function, from unified indoctrination of quality education to the combination of unity and separation, and from commonness and individuality, so as to realize the systematization, individualization, legalization and modernization of quality education working mode. Secondly, the operation of quality education. Quality education should be operated from three aspects, namely, implementing Quality education curriculum, attaching importance to daily life quality and improving professional practice ability. Among them, the vocational curriculum for quality education includes the orientation of instilling professional ethics, culture and spirit in vocational knowledge and skills [3]. The quality of daily life should attach importance to the cultivation of students' ideology, morality, behavior, norms and so on. Improve professional practice ability distribution in each specialty basic course, specialty course and each specialty practice, especially attach importance to the offering of vocational practice course.

In a word, the core position of quality education should be embodied in all social practice activities and permeated in all courses, whether explicit basic courses, professional basic courses, professional courses or professional practical courses, or hidden courses.

## 2.2 Establishment and Trend of Basic Ideological and Political Curriculum

Since entering the 21st century, the German federal and state ministries of culture and education reached a consensus: the future society should be a learning society. In order to make the young people enter the future learning society confidently, the German state departments of culture and education began to implement a series of curriculum reforms. Among them, the emphasis on general education of students is attached great importance to vocational education of students, because they realize that society on the one hand needs high-level academic researchers, on the other hand, society on the future also needs high-level engineers and technicians and skilled workers, especially different service industries need various capable staff. An important reason for this is the low enrolment rates in German high schools.

In Germany, where the “dual system” education mode is the main body of vocational education, the cultural basic courses including mathematics courses are in a relatively weak position. From the definition of the first chapter we know that the “dual system” vocational education model can be understood as: time, place, people, tasks, the results of change, see Table 1.

**Table 1.** Teaching hours of politics

Curriculum classification	Course title	Class hours	Teaching week, hours allocation			
			1	2	3	4
			20 weeks	20 weeks	10 weeks	10 weeks
Public foundation course	Language politics	240	4	4	4	4
	Mathematics Politics	240	4	4	4	4

(continued)

**Table 1.** (continued)

Curriculum classification	Course title	Class hours	Teaching week, hours allocation			
			1	2	3	4
			20 weeks	20 weeks	10 weeks	10 weeks
	English politics	240	4	4	4	4
	Moral education and politics	140	2	2	2	2
	Career planning	40	3	3	3	3
	Sports politics	240	3	3	3	3
	Subtotal	1140 (30.5%)				

Although the “dual system” of vocational education is intended to emphasize the equal status between enterprise training and vocational school education, under the “dual system” curriculum system, the curriculum focuses on acquiring useful professional skills and practical experience in professional fields, and under the influence of pragmatism, inevitably weakens the cultural basic curriculum, while regarding the cultural basic knowledge, what is needed to learn. At the same time, German vocational education attaches great importance to the cultivation of students’ practical ability, increasing the proportion of specialized courses and reducing the proportion of common culture courses, which inevitably results in the incoordination of the proportion of common culture courses and specialized courses.

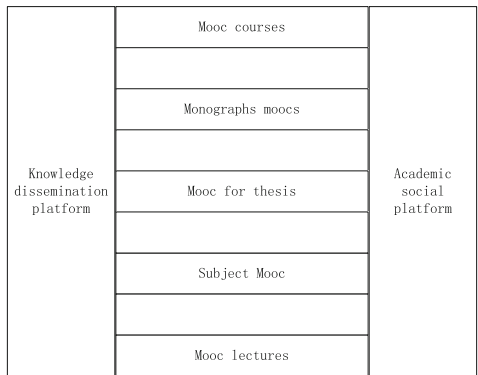
**2.3 Orientation of Ideological and Political Education**

Curriculum reform is the core of today’s education reform, while the reform of mathematics curriculum is a comprehensive and systematic process because of its special nature. Curriculum objective is the basic element of curriculum. It directs the development direction of curriculum, decides the selection and organization of curriculum content and guides the teaching evaluation. Correct understanding and scientific grasp of curriculum objectives is the key to improve the quality of education and achieve the goals of school education [4]. From the perspective of ideological and political thought, cultivating students’ good personality quality is the key to quality education, the need to build the ideological and political learning center, and the guarantee for students to learn ideological and political courses well. The ideological and political course is an important course in higher education, which is different from the corresponding courses offered by ordinary colleges and universities. It has distinct vocational characteristics.

Another main function of college public basic curriculum function is the need of citizen quality cultivation. Thinking and politics is an important part of modern culture. Thinking and politics permeate into all fields. The application of thinking and politics is paid more and more attention by the society. It is an important measure to use the knowledge to solve practical problems and make students have the ability of thinking and politics. This is an important measure to transfer the dual system education to the track of improving citizen quality education. At present, most of the students are weak in

practice ability and application consciousness. In the long run, learning will be useless, unable to adapt to the needs of social development. Therefore, it is particularly important in ideological and political education to cultivate students' consciousness of ideological and political application and improve their ability to solve problems.

The orientation of ideological and political education in secondary vocational schools should be to cultivate students' developmental comprehensive accomplishment and their learning ability. Vocational education for sustainable development mainly refers to the continuous development of human resources through high-quality education and training to enhance the ability of sustainable development of workers, so as to serve social and economic sustainable development. Vocational education, which takes the development of human resources as its own duty, is no longer limited to pre-service education and training, but to extend to the whole career (Fig. 1).



**Fig. 1.** MOOC application model

Since the reform and opening up, with the rapid development of economy and high technology, the demand for science and technology and talents has been increasing day by day. The training goal of MOOC is to train technical and skilled talents with professional quality and ability, which fits in with the demand of regional economic development for higher education. A large number of domestic and foreign -funded enterprises are expanding in different places of our country, and the transfer of capital, technology and product markets is unable to realize the transfer of highly-skilled human resources at the same time. Domestic and foreign -funded enterprises with generally high technological content need our educational institutions, especially higher education, to be able to respond quickly and provide them with sufficient and high-quality human resources [5]. Under the background of rapid development, the regional economic society has put forward higher requirements for the quantity and quality of ideological and political education personnel training. Ideological and political education can train laborers with modern quality and ability, effectively improve the comprehensive ability of laborers, provide reliable human resources for economic development, effectively enhance regional economic competitiveness, and promote sustainable and rapid development of regional economy. Vocational education provides intellectual and technical

support for the sound and rapid development of regional economic industry, and is an effective guarantee for the sustainable development of regional economic industry.

### **3 Localization Practice of “Dual System” Ideological and Political Teaching Mode**

#### **3.1 Characteristics of German “Dual System” Ideological and Political Education Mode**

German “dual system” vocational education originated from the training method of “master with apprentice” in German medieval handicraft industry. It is a vocational education mode combining school education with enterprise training, emphasizing the integration of learning and doing, and complementary advantages. Compared with school-based vocational education, “dual system” vocational education pays more attention to practical skills, so it is welcomed by enterprises and apprentices. The “dual system” is a kind of educational system, which is based on occupation, led by enterprise, centered by students, guided by employment and guaranteed by law. Focusing on the educational goal of training skilled talents, the government, enterprises, schools and associations have a clear division of labor, perform their respective duties and operate effectively. German “dual system” vocational education mode has trained a large number of high-quality technical personnel for Germany, and provided a strong guarantee for Germany’s post-war rapid economic growth. German products have become synonymous with high quality in the world, and “dual system” vocational education is one of its “secret weapons”.

In the “dual system” mode, schools open the door to open schools, and enterprises or employers to complete the teaching and practice process. It ensured the close combination of education and production. Students spend most of their time in enterprises, where they are trained in practical skills and exposed to the most advanced equipment and technology. At the same time, the school is closely linked with the community, enterprises, students in school learning at the same time, have the opportunity to practice production [6]. To a great extent, productive labor can reduce the cost and improve the learning goal, so that students can not only learn basic theoretical knowledge, but also master practical skills and help students to put into work immediately after finishing their studies.

#### **3.2 Effective Teaching Methods of Ideological and Political Education**

At present, the employment situation of college graduates in our country is becoming more and more severe. On the one hand, students can’t find ideal jobs, and the phenomenon of employment becomes more and more serious. The main reason is that school education is divorced from the needs of enterprises, schools are divorced from enterprises, vocational education is facing the difficult situation of “no talent schools needed by enterprises and no students and enterprises trained by schools”, so the reform of vocational education mode is the key [7]. Under the framework of the concept of lifelong education and the learning-oriented society, ponder over the lifelong and socialization of vocational education, embody the characteristics of vocational education such

as diversity and professionalism, aim at serving the local economic and social development, adjust measures to local conditions, highlight characteristics, borrow the advanced experience of foreign countries, and borrow the stone of other countries to go its own way.

German “dual system” mode, that is, enterprises and schools jointly undertake the task of training unscrupulous people, according to the requirements of enterprises for unscrupulous people to organize teaching and on-the-job training, students can work on the job after graduation. This kind of pattern has the very good instruction function to China’s vocational education, moreover can satisfy the current China social economy development the demand. The “dual system” emphasizes the combination of work and study, which is to closely combine higher education with social needs and the needs of enterprises, and to closely combine the application research and technology development carried out in cooperation with enterprises, so as to enable enterprises to participate in the reform and development of schools while sharing the advantages of school resources, so as to innovate the mode of personnel training in school-enterprise cooperation, realize the win-win cooperation between schools and enterprises, and effectively solve the unprecedented employment pressure that our country is currently facing.

Marxist theory on the all-round development of man holds that “human development is consistent with the development of social production.” The old-fashioned division of labour has resulted in the one-sided development of man, and the production of large industrial machinery requires the all-round development of man and provides a material basis for his all-round development. The fundamental way to achieve his all-round development is to combine education with productive labour.” The theory of all-round development of this person is an important theoretical basis for the purpose of education, which points out the direction of ideological and political education. Karl Marx and Karl Marx Sigus demonstrated that the development of industrial production requires the all-round development of human beings, and on this basis, pointed out that the future society will cultivate new people with all-round development through education. According to Karl Marx and Karl Marx Sigus, people who are fully developed are those who are fully free to develop intellectually and physically, and those who combine mental and physical labor. Call this “person who has the ability in all aspects, that is, the person who knows the whole production system” a person of all-round development. This fully developed person will be fully free in physical and mental development and use, “according to the needs of society or their own hobbies, from one production sector to another in turn.” Although the theory of man’s all-round development is a part of the theory system of political economy, it is also of great significance to ideological and political education. It has established the modern vocational education take the human as the main body, has established the raise comprehensive development modern professional person’s rationale.

First of all, the educational goal of humanistic learning theory is to stimulate learners’ learning motivation, develop their potential and positive self, and train students to learn to learn, so that learners can educate themselves and finally achieve self-realization. Secondly, humanistic learning theory advocates students’ subject status in education, emphasizes keeping students curious in the process of teaching, explores any unknown field with the guidance of their own interests, and realizes that everything is changing

and developing [8]. The primary task of teachers as facilitators is not to “teach” but to “promote”, allowing students to learn independently and satisfy their own curiosity. Humanistic Learning Theory Advocates and Teaches the Value of Human Being.

The core of the purpose of education. This is consistent with the current people-oriented, student-centered educational thinking.

With the rapid development of dual curriculum and the integration of international information exchange, the demand for talents has gradually shifted from singleness to pluralism, i. e. paying more attention to people’s creativity and innovation while paying more attention to knowledge and skills. As far as the goal of talent cultivation is concerned, students should be trained to be “people who learn how to learn” and “people who learn how to adapt to change”. In the process of personnel training, we should pay attention to the training of learning, mobilize the students’ initiative to learn to the maximum, and cultivate positive, adapting to the changes of the times. In the training methods of talents, it advocates the learner-centered and harmonious teacher-student relationship. Humanistic Learning Theory Model for Current Talents Training.

Type of reform has a certain guidance, reference role, especially for the positioning of modern professionals can well meet this demand.

### **3.3 “Dual System” in Germany and Ideological and Political Mode in Domestic Universities**

The dual system in Germany is set up scientifically to cultivate professionals according to the market demand, which provides a reference for the transformation of higher vocational education in our country. The goal of higher vocational education determines the characteristics of its talent training must be market-oriented. Both at home and abroad, the talents trained by higher vocational education should be recognized and welcomed by the society [9]. Therefore, vocational education in China must be market-oriented, based on the premise of the market, to the needs of society as the center, the society needs what talent, higher vocational training on what talent, what new profession, the corresponding opening of what profession [10]. Our country higher vocational education personnel training pattern studies Germany “the dual system” the experience, pays great attention to the practice study to practice, the implementation teaching and the production labor unifies. Schools and factories and enterprises to cooperate, the enterprise as a vocational and technical students to produce labor and teaching places. This not only carried out teaching, but also enable students to participate in the labor exercise, improve the vocational ability. Schools and enterprises to cooperate, not only play their own advantages, but also make up for their own shortcomings, students have been trained in both theory and practice. At the same time, our higher vocational education must pay attention to the cultivation of students’ ability [11]. Ability training is the core of higher vocational education. Ability is not only operating skills, but also a kind of professional ability. Germany’s “dual system” is aimed at students to carry out this ability, so that the overall quality of students have been comprehensively improved, enhance the advantages of higher vocational education.

Of course, in the process of learning Germany’s “dual system”, there are still some gaps in China’s talent training model [12]. Germany’s “dual system” mode of practical teaching is mainly completed in enterprises, rather than in schools, practical teaching is mainly undertaken by enterprises. But our country higher vocational education practice teaching link nearly has in the school but is not in the enterprise. Vocational education in Germany is becoming more and more general and vocational [13]. Vocational education and general education are infiltrating each other. In order to cultivate the talents who can meet the needs of the development of modern society, the “dual system” combines the academic courses with the vocational courses in the curriculum setting. But there are two tendencies in our country’s vocational education: one is to pay too much attention to theoretical study, and the proportion of practical teaching is obviously low; The students thus trained are either too narrow in their knowledge or too simple in their vocational skills, which imperceptibly limits their choice of posts and their adaptation to society.” Coupled with the lack of national investment in higher vocational education, social understanding of vocational education and other reasons, vocational college students’ self-identity is very low.

### 4 Results

Take J university as the research object, designs the following example application experiment. Since its establishment, J School has taken the lead in introducing the concept of “MOOC” into students’ work, and gradually expanded it to the purpose of “Ideological and Political Teaching Mode of Sino-German Dual System Courses in Colleges and Universities”, so as to create an educational atmosphere with modern vocational education characteristics. As J School students strive to become modern professionals, the college’s good social image has been highlighted, the leading role of local social and economic development is gradually highlighted, and the graduate employment rate has been among the highest in the province for several years (Figs. 2 and 3).

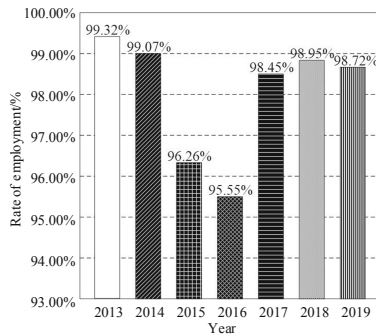


Fig. 2. J School graduate employment data for 2013–2019

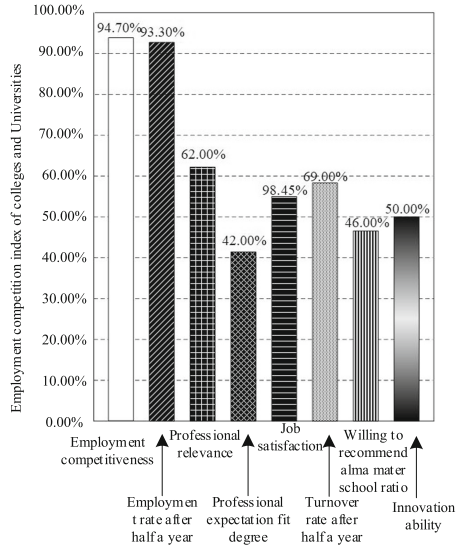


Fig. 3. J School graduates 2013–2019

The above two pictures are the graduate employment status of J School in 2018, 2019 follow-up survey. According to the 2019 Employment Report, J School ranks fourth out of 55 public vocational colleges in the province in 2017, while the graduates of 2018 rank third in terms of employment competitiveness. After six months, the monthly income of college graduates is 2,934 yuan, 152 yuan higher than the average in the province. The employment rate exceeded 95% for seven consecutive years from 2013 to 2019. Therefore, the modern professionals trained by J School can quickly integrate into the society, adapt to the requirements of enterprises and have strong employment competitiveness.

## 5 Conclusions

It is a brand-new idea in the ideological and political education field in recent years to probe into the path of modern professional training under the “dual system” talent training mode in colleges and universities. Combining the “dual system” with the “modern professional person”, this paper probes into the talent training in colleges and universities, which breaks through the traditional thinking mode of studying the two separately. Ideological and political education is a kind of education to cultivate talents of different levels in the field of vocation, and it serves the local economic and social development directly. Therefore, it must be rooted in a specific regional economy, with strong local characteristics, its professional settings and personnel training should be adapted to the local economy and industrial structure.

MOOC thinking method has penetrated into all areas of people’s lives, thinking has become an important part of social civilization. Ideological and political teaching in colleges and universities should serve not only the professional service but also the

sustainable development of students so that they can become social citizens with good quality. The content of ideological and political education in colleges and universities should adhere to the principle of “making ideological and political education a tool of study and a means of solving problems and constructing a platform for the development of students’ personality at different levels”. In teaching practice, students should master the methods of solving practical problems, cultivate the ability of applying ideology and politics, so as to make students experience the humanistic value of mathematics, lay a foundation for them to go to the society and study for their whole life, and improve their interest in mathematics.

One of the main functions of college public basic courses is to serve professional teaching, but the actual situation is not so. In view of the recent situation, the knowledge points in the public basic courses in colleges and universities are far beyond the needs of professional knowledge learning, and most cultural knowledge is difficult to find usability in professional courses, even if there is one. The teaching requirements of college public basic courses are far from meeting the needs of professional learning, and do not meet the needs of professional teaching. Education in colleges and universities is a systematic project. A certain course can not be positioned from one’s own point of view. The overall goal should be taken into account.

For the future work content, we can improve the data management system, strengthen the construction of campus spiritual civilization, and change the traditional teaching concept in the ideological and political teaching mode of Chinese German Dual System Course in Colleges and universities. The era of big data brings new opportunities and challenges to the ideological and political teaching mode of dual system curriculum in China and Germany. In order to meet the big data age better, college teachers should actively innovate teaching ideas and improve their own quality. Teachers should constantly change their teaching ideas and improve their ability to master data, so as to ensure the efficiency of Ideological and political education. Universities can improve students’ initiative in learning through big data platform, better carry out the dual system curriculum ideological and political teaching mode between China and Germany, provide students with good ideological and political courses, and promote the development of innovative mode of Ideological and political education in the era of big data.

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