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Research Article

Innovation of Talent Cultivation Education Mode of Modern Apprenticeship Participated by Industry Associations*

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Abstract

The modern apprenticeship talent cultivation mode can meet the needs of high-skilled talents under the new normal economic and social conditions in China. As a bridge between the government, enterprise and school, industry associations are of great significance and play an important role in the cultivation of talents in schools. This paper studies the participation of industry associations in the talent cultivation education mode of modern apprenticeship, analyzes the role and responsibility of industry associations in the talent cultivation of modern apprenticeship and constructs the talent cultivation education mode of modern apprenticeship participated by industry associations. The research results show that: industry associations can promote the connection between the school and enterprise and government, provide teaching resources for the talent cultivation education mode of modern apprenticeship to facilitate the professional settings and curriculum construction. This study provides a scientific basis for the participation of industry associations in the talent cultivation of modern apprenticeship and can promote the development of talent cultivation of modern apprenticeship.

Keywords

Industry Association • Modern Apprenticeship • Talent Cultivation

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China is currently in a critical period of economic structural transformation and upgrading and the economic growth mode is developing from labour-intensive industries to technology-intensive industries. Therefore, the demand modern skilled talents have increasingly exceeded the supply. Vocational education and cultivation are the main methods for the cultivation of modern skilled talents. Deputy Director Wang Jiping of the Ministry of Education pointed out (Sui, 2006; Ren, 2009) that we should explore the modern apprenticeship system suitable for China's national conditions to achieve the teaching objective that everyone has skills and knowledge.

Apprenticeship is not a new form of education, which has existed since the Bronze Age. It reached its peak in the 13th-14th century and industry associations were born at this time. During this period, the apprenticeship was in the form of traditional apprenticeship or industry apprenticeship. In the 16th and 18th centuries, European countries began to regulate the apprenticeship in order to alleviate social conflicts. Therefore, the apprenticeship during this period was called the state intervention apprenticeship (Lederer, 1990). Two times of industrial revolutions have completely overturned the foundation of the traditional apprenticeship. The vocational education has flourished, so the apprenticeship was called the factory apprenticeship (Harhoff & Kane, 1997). However, due to the lack of relevant institutions, the apprentices became cheap labor force. The modern apprenticeship system has evolved from the apprenticeship vocational education system represented by dual system in Germany in the 1960s (Millard, 1999). The definition of modern apprenticeship varies from country to country due to differences in cultural, political and economic conditions. The schools and enterprises in the industry work together and the main cultivation form of modern apprenticeship in China is the “masters training apprentices” in the practical teaching link (Belcher, 1994). There is not a unified concept of industry associations in the academic world. By referring to relevant references at home and abroad, it can be found that the its essence and connotation are consistent, that is, industry associations are intermediary and service-oriented unofficial organizations voluntarily organized with the purpose of safeguarding the interests and normal operation of the industry (Heckhausen & Tomasik, 2002). Historically, industry associations have played an important role in the development of apprenticeship standards and self-discipline standards in the apprenticeship era. Many foreign scholars have studied the role of industry associations from the perspectives of political science, economics and sociology. Some scholars believe that industry associations can maximize the role of vocational education (Tao, 2004). Chinese scholars have also carried out researches from the perspective of the concept, nature and role of industry associations in various fields (Lee, 1995). It can be found through the analysis that although the research results of industry associations at home and abroad are relatively rich while there are few researches on the participation of industry associations in school education. There is nearly no research result related to industry associations and the talent cultivation of modern apprenticeships.

Based on the above analysis, this paper studies the participation of industry associations in the talent cultivation education mode of modern apprenticeship (Cong, 2017), analyzes the role and responsibility of industry associations in the talent cultivation of modern apprenticeship. On this basis, this paper constructs the talent cultivation education mode of modern apprenticeship participated by industry associations.

Analysis of the Responsibility of Industry Associations in the Talent Cultivation of Modern Apprenticeship

Promoting the Relationship Between Schools, Enterprises and the Government

The essential role of industry associations is the intermediate organizer, which is the link and bridge connecting the government, enterprises and schools. It can be seen in Figure 1 that industry associations can provide the necessary information for the talent cultivation in schools, promote the connection between schools, enterprises and other organizations and reflect the form of social development and market changes to the government.

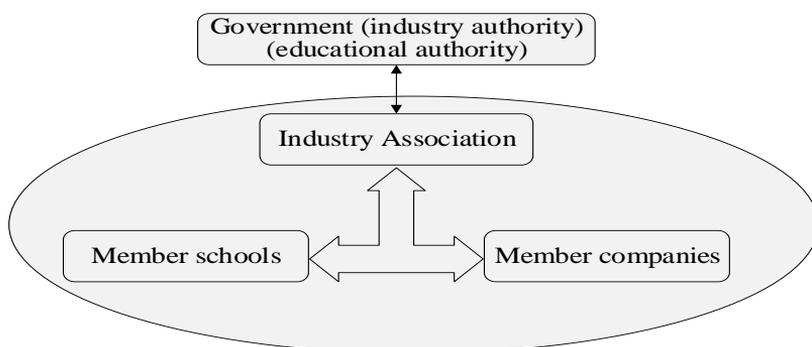


Figure 1. Government-integrated, modern industry apprenticeship cultivation with industry associations as the hub and members (schools, enterprises).

Participating in the Professional Settings and Curriculum Construction of Talent Cultivation

When industry associations participate in the talent cultivation education model of modern apprenticeship, the professional settings and curriculum construction are not completed independently by the school but are based on the professional qualification standards set by industry associations, guided by enterprises' requirement for talents provided by industry associations and on the basis of the actual situation of the industry and the production line of enterprises, so as to avoid opening popular majors blindly and causing waste of educational resources, and cultivate compound talents in line with the actual needs.

Teaching Resources Provided by Industry Associations

Modern apprenticeship requires the alternation of practice and learning. However, there are many problems in most of the colleges and universities in China currently, such as insufficient teaching equipment and unreasonable teacher structure. Industry associations can optimize the allocation of resources by taking advantage of the advanced equipment and technical personnel of enterprises, provide opportunities for the

practical training of students in the school and assign specialized technical backbones as masters in the modern apprenticeship (Cheng, Xiao & Wang, 2018) teaching work to guide students to complete the “understanding of positions” activities from the preliminary stage, to the “practice” in the medium stage until the final “professional internship” and “fixed internship” process.

Talent Cultivation Education Mode of Modern Apprenticeship Participated by Industry Associations

Curriculum Construction

The public courses and professional skills courses are two basic courses of the curriculum. According to the talent cultivation needs of the modern apprenticeship, the courses are divided into the following four modules, as shown in Figure 2:

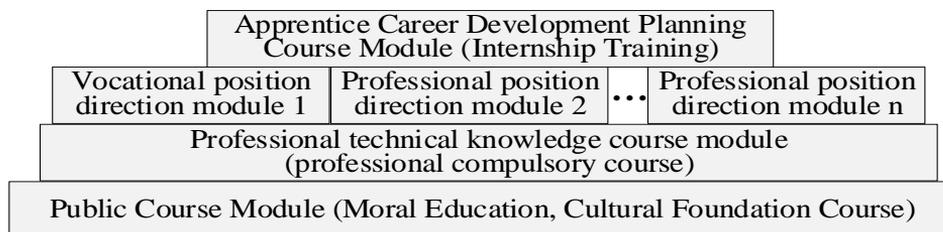


Figure 2. Schematic diagram of modern apprenticeship curriculum.

Public course module: The public course module mainly includes the study of moral education courses and cultural foundation courses. Although most of the public course module is arranged by the state, the course content and teaching methods can be flexible and diverse. The industry is also the main body of curriculum construction, which can integrate culture, values and safety education of the industry into the public curriculum module, laying the foundation for students to develop correct professionalism and career planning.

Professional technical knowledge course module: The professional technical knowledge course module should start from the ability of professional positions. The content should cover the basic knowledge and skills required for each position in the same industry and students can complete the common working tasks of the professional positions in the same industry. Therefore, the module contains two parts: professional general theoretical knowledge system and professional general technical knowledge system.

Vocational position direction course module: The basis of the module construction is based on the professional qualification standards formulated by industry associations and enterprises’ requirement for the talents provided by industry associations. The main method is that masters train the apprentices, which are used to train specific job skills in specific positions. In order to reflect the subjective status of students and to stimulate their interest in learning, more than two professional courses in the direction of professional positions can be set up for students to choose.

Apprentice career development planning module: The main purpose of this module is to cultivate the good professional ethics and professional qualities of apprentices according to their professional value orientation. Schools, industries and enterprises can send technical backbones and advanced individuals to teach students in accordance of their aptitude in the way of masters training apprentices.

In addition to setting up a reasonable curriculum system, schools should also discuss with industry experts ad formulate innovative and open teaching standard and teaching plan of talent cultivation based on the practice and learning alternation needs of modern apprenticeship, such as the arrangement of teaching time and place and the management of credits. The textbooks play an important guiding role in the study of students. However, most of the textbooks are relatively old-fashioned and disjointed from actual production, which cannot adapt to the modern apprenticeship teaching mode. Therefore, schools should work with industry and enterprise experts to compile textbooks suitable for industry needs. Figure 3 shows the development process of textbooks.

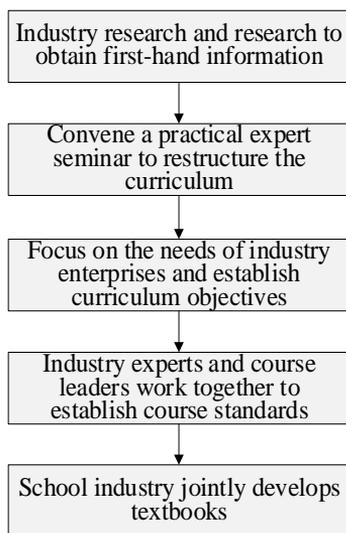


Figure 3. Three-dimensional textbook development and writing flow chart.

Teaching Organization

Teaching management: The modern apprenticeship has broken the previous school-based and classroom-centered teaching model. The combination of "work-study" and "school-enterprise cooperation" is the main form of modern apprenticeship in teaching organization. The teaching subject and the teaching team have also changed. This teaching mode requires the transformation of teaching organizations from unstructured to structured. In modern apprenticeship teaching, students have the dual identity of students and apprentices. Therefore, in the teaching management, the flexible management and academic system jointly participated by schools and enterprises should be implemented.

Construction of practical training base: In order to realize the connection between the teaching process and the production process, practical teaching should run through all parts of the talent cultivation of modern apprenticeship. Therefore, the on-campus and off-campus practical training base is an important task of the teaching and organization management of modern apprenticeship. Schools, industries and enterprises should jointly co-ordinate. On the one hand, the on-campus cultivation base close to the actual working scenario corresponding to students' skills and social needs should be established; on the other hand, off-campus practical training base should be established in enterprises through communication and coordination with industry associations. Also, professionals should be assigned as masters to lead the study so as to achieve the unity of practice and learning. Figure 4 shows the structure of the cultivation base built by schools and industry associations.

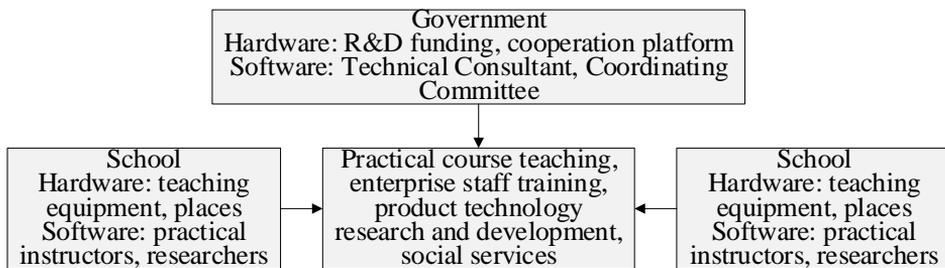


Figure 4. School and industry jointly build a cultivation base.

Teacher Construction

Teachers are the main implementers of the talent cultivation of modern apprenticeship. The "double-type" teaching team should be the focus of teacher construction. The teaching team of modern apprenticeship should be composed of full-time and part-time teachers with reasonable structure and high level, that is, full-time teachers should include the professional leaders and the backbone teachers of the school while the part-time teachers are the technical backbones selected by the enterprise as enterprise masters, whose proportion should be greater than or equal to 25%. Enterprise masters, like full-time teachers, should receive regular training and assessment to ensure the teaching quality.

Conclusion

The talent cultivation of modern apprenticeship is inseparable from the participation and guidance of industry associations. This paper focuses on the participation of industry associations in the talent cultivation education mode of modern apprenticeship. The specific conclusions are as follows:

(1) Through the combing of relevant concepts, the concept of modern apprenticeship and industry associations and the importance of industry associations in the talent cultivation of modern apprenticeship are clarified.

(2) The role and responsibility of industry associations in the curriculum construction and teaching resources of talent cultivation and connections between enterprises and the government of modern apprenticeship are analyzed.

(3) The talent cultivation education mode of modern apprenticeship participated by industry associations is analyzed and expounded from the perspective of curriculum construction, teaching organization and construction of teacher team.

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