

Integration of enterprises with vocational schools and universities promotes the all-round progress of applied talents

Wenfu Liu¹, Xinghua Qi²

¹College of Energy Engineering, Huanghuai University, Zhumadian, Henan, 463000, China

²College of Economics and Management, Huanghuai University, Zhumadian, Henan, 463000, China

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Abstract: Integration of enterprises with vocational schools and universities (IEVSU) education is a kind of cooperative education based on quality education, which focuses on cultivating students' all-round quality, comprehensive application ability and employment competitiveness, making full use of various educational environments and resources such as schools, enterprises and scientific research institutions, and giving full play to their respective advantages in talent training. Local universities seize the important opportunity of national industrial transformation and upgrading and deepen comprehensive reform in the field of education, and actively explore the development pattern of new ecology and new universities with their own characteristics under the guidance of IEVSU development ideas. In this paper, the reform ideas of IEVSU to promote the all-round progress of applied talents are given: strengthening the in-depth cooperation between schools and enterprises, reforming the curriculum system, innovating the talent training mode, and building a team of applied high-level teachers, so as to provide reference for the training of applied talents in new engineering in local universities.

1. Introduction

When transformation and development have become an unquestionable development theme, integration of enterprises with vocational schools and universities (IEVSU) has unconsciously integrated people into local undergraduate colleges. The supply side of talent training and the demand side of industry can not fully adapt to the structure, quality and level [1]. Deepening IEVSU and promoting the organic connection between education chain, talent chain, industrial chain and innovation chain are urgent needs to promote the structural reform of the supply side of human resources.

Based on the needs of talent training in today's society, as a transitional university, we should fully understand the actual connotation of IEVSU and strengthen the reform of teaching mode around the connotation. Local universities seize the important opportunity of national industrial transformation and upgrading and deepen comprehensive reform in the field of education, and actively explore the development pattern of new ecology and new universities with their own characteristics under the guidance of IEVSU development ideas.

2. Necessity of IEVSU education reform

IEVSU education is a kind of cooperative education based on quality education, which focuses on cultivating students' comprehensive quality, comprehensive application ability and employment competitiveness, makes full use of various educational environments and resources such as schools, enterprises and scientific research units, and gives full play to their respective advantages in personnel training, organically combining school education with direct access to practical experience and practical ability with production and scientific research practice in the process of student training [2-3].

IEVSU education plays an important role in national economic and social development. It is the

most direct and close part of education which is related to economic and social development. It undertakes the important task of cultivating high-quality workers and all kinds of talents with specialized skills, which is of great significance to the economic development and national income of a country, and is also conducive to improving the employment rate and social stability. Its appearance conforms to the needs of economic and social development and is inevitable.

Application-oriented universities train applied talents engaged in front-line production technology, management and service. High-quality applied talents need to have the ability of resource integration and technological innovation on the basis of mastering the application of technology, so as to carry out post innovation and independent entrepreneurship and better serve the regional economic development [4]. From every characteristic that applied talents should possess, we can see that it is inseparable from school-enterprise cooperation, IEVSU, to truly cultivate students into applied talents that meet the needs of society and meet the requirements of posts.

3. Problems existing in IEVSU at present

3.1. Not deep in level

Universities should change their school-running ideas to serve local economic development, IEVSU, cultivate applied talents and enhance students' employability. Focusing on the main line of IEVSU and school-enterprise cooperation, further adjustment of major setting, optimization of discipline construction and reconstruction of curriculum system have become an important part of university connotation construction [5-6].

Some universities' IEVSU cooperation mode is simple, and the root cause lies in the lack of cooperation motivation and enthusiasm of enterprises, the lack of pragmatic cooperation schemes between schools and enterprises, and the failure to establish a long-term cooperation operation and guarantee mechanism [7-8]. In addition, some cooperative enterprises are small in scale, or the professional quality of technicians is not high, so they can't provide professional guidance for students. The school is unable to fund the establishment of cooperative bases, students lack long-term practical opportunities, and IEVSU stays at the level of cognitive practice.

3.2. The construction of teaching staff lags behind

Due to the structural irrationality in the development of China's university education, we can't accurately locate the direction of running a school in the process of establishing an applied talent training system, and there is a phenomenon of blindly following the trend in specialty setting, which leads to the serious homogenization of applied talent training and the mismatch between talent training and social needs [9].

From the perspective of IEVSU, the cultivation of applied talents in universities needs the support of a team of "double-qualified" teachers, so as to cultivate more applied talents with high quality and high level. Teachers' teaching level and comprehensive quality are required to be higher. For example, teachers need to deeply connect with enterprises and industries, organize and carry out related scientific research activities, and turn scientific research achievements into actual labor productivity. It is also necessary to strengthen the cultivation of students' applied skills, thus restricting the depth and breadth of IEVSU.

3.3. The educational management system is not perfect

The current educational management system is not conducive to the development of IEVSU. At present, China's colleges and universities are completely managed by the education administrative department, and the industry lacks effective guidance for vocational education. The cooperation between schools and enterprises is in the state of non-governmental activities. In practice, the provisions on responsibilities, rights and interests are vague, and the two sides cannot establish a long-term, stable and mutually beneficial cooperation mechanism, which restricts the in-depth, sustained and healthy development of IEVSU. School-enterprise cooperation can develop healthily only on the basis of mutual benefit. Due to historical reasons, some universities, especially

universities and colleges, have incomplete experimental conditions, too small investment in software and hardware, teachers' enthusiasm for scientific research is not high, or they are too busy to take care of scientific research because of the completion of teaching workload, which makes the cooperation between schools and enterprises not smooth and affects the development of school-enterprise cooperation.

4. The reform idea of IEVSU promoting the all-round progress of applied talents

4.1. Strengthen in-depth cooperation between schools and enterprises

Mutual benefit and win-win is the basis of the reform of IEVSU applied talents training. Schools should change their ideas, take the initiative to invite enterprises to inspect the school, listen to their opinions, get to know the ability and willingness of enterprises to conduct IEVSU in time, give full play to their own characteristics and advantages, determine the training objectives and establish the training mechanism of applied talents in IEVSU according to the actual situation and development trend of enterprises.

The cooperation among industries, enterprises and universities is based on "mutual benefit and win-win". First, we should actively create a social environment for collaborative education, call on the state to establish perfect laws and regulations and introduce relevant policies, so as to build IEVSU on a solid legal and policy platform and strengthen the implementation of the responsibility of collaborative education between enterprises and universities; Second, we must strive to become a technological innovation base for industries and enterprises, actively integrate into regional and industrial technological innovation systems with enterprises as the main body, extensively carry out scientific and technological services and applied innovation activities for enterprises, support technological research and development of enterprises, and promote the development and application of new technologies. Conditional universities in transition should take the initiative to meet the demand for high-level, innovative and compound talents from industrial advanced technology transfer and innovation, jointly train graduate students with industries and enterprises, and explore a new way for IEVSU to train applied masters.

The training of applied talents based on school-enterprise cooperation can innovate the training mode of talents according to the characteristics of majors and the reality of supporting enterprises in running schools. The qualified majors can implement the 3(4)+1 training mode. The teaching of theory and basic practice is arranged in the school in the first 3(4) years, and all the internship and graduation comprehensive training are arranged in the enterprise in the last year. By establishing an effective system and mechanism, both schools and enterprises jointly manage [10]. Enterprise technicians or managers participate in comprehensive training guidance for graduation. The school monitors students' learning and practice in the enterprise through information technology, and arranges on-site inspection and guidance by instructors when necessary.

4.2. Curriculum system reform

The reform of curriculum system should emphasize professional quality education and ability training, and establish a modular professional curriculum system. The purpose of this curriculum system is to cultivate students' professional ability, rely on project courses, and promote the docking of curriculum system and post professional standards under the guidance of professional practice. Innovating in teaching methods, focusing on the cultivation of students' creative thinking, actively carrying out heuristic, discussion and participatory teaching, and encouraging small class teaching. In addition, we should innovate in learning methods.

In order to give full play to the advantages of enterprises and make them participate in the construction of professional core courses, schools should deeply understand the current situation and development trend of the industry, as well as the skills requirements of applied talents, and build the course content on this basis. Modular curriculum refers to dividing the whole curriculum system into several independent and closely related curriculum modules. According to the needs of career development planning and industrial development, combined with students' own interests

and hobbies, these modules can be combined and optimized to meet students' individual needs.

4.3. Innovation of talent training mode

Under the background of IEVSU, the traditional ideas and modes of talent training in universities are obviously insufficient. Therefore, universities must closely meet the development needs of industry enterprises, cultivate school-running characteristics and explore more efficient talent training modes. For example, universities can make full use of the practice platform of industry enterprises to build a talent training model integrating theory with practice, which can improve the level of talent training.

Facing the needs of industry, we should attach importance to the cultivation of college students' innovative and entrepreneurial ability. Based on the actual needs of vocational and technical fields and job groups, the training specifications and training programs for professional talents are formulated. Starting from the needs of training objectives, we should boldly reform the curriculum system and rebuild the theoretical teaching system. Technical education is employment education oriented by social needs. Whether graduates can adapt to the needs of the front line of production of industrial enterprises and whether they can "get down, use and stay" is an important symbol of the success or failure of technical education. By learning from enterprise technicians, students not only learn the most practical technology, but also learn the concept of corporate culture. In this way, after graduating from the enterprise, students save time to adapt to corporate culture and can be integrated into the enterprise as quickly as possible.

4.4. Build a team of applied high-level teachers

School transformation, teacher-oriented. Application-oriented universities should first build a team of "dual-qualified and dual-capable" teachers who are proficient in business, familiar with the industry and reasonable in structure. Teachers should not only have profound theories, but also be familiar with industry norms and be able to talk to the industry. Teachers in applied universities should pay equal attention to professional theory, practical ability and teaching and educating ability. On the one hand, school-enterprise cooperation is to hire experts and engineers from enterprises to teach in the school, and on the other hand, the school uses the actual production posts of enterprises to provide a platform for the cultivation of "double teachers and double abilities" of university teachers.

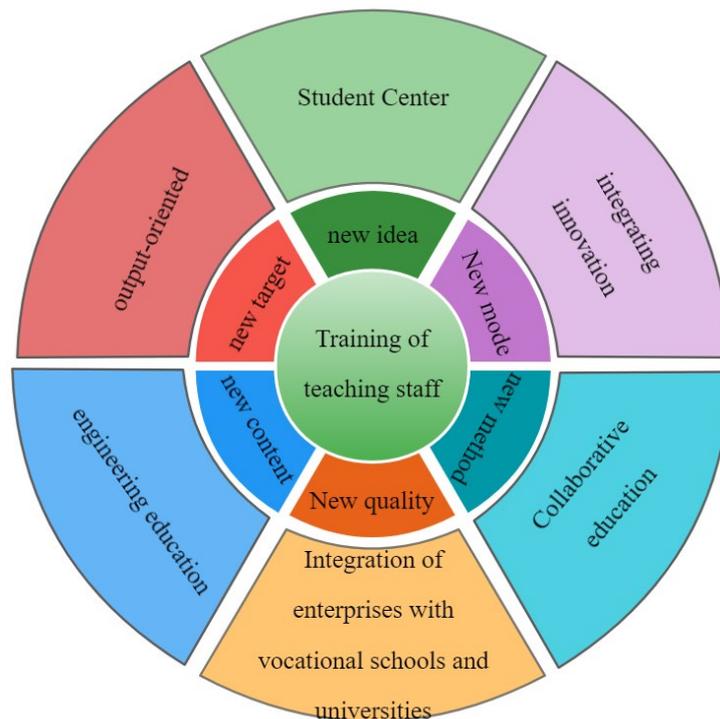


Figure 1 Cultivation of teachers' practical ability in multidisciplinary cross-integration engineering

First-class teachers are the key to training first-class talents. Teachers must have advanced educational concepts, intelligent teaching ability to use big data, ability to guide innovation and entrepreneurship, school-enterprise cooperation ability, engineering practice ability, international communication ability and so on. Professionally explore the construction path of new engineering teachers, improve the teacher reward mechanism, enhance the engineering background, strengthen the cooperation and exchange between teachers and industry professionals, and cultivate teachers' innovation and practicality (Figure 1).

First, we should establish a correct policy orientation, take the construction of "double-qualified and dual-capable" teachers as the top priority of school work, strengthen the classified management of teachers, enhance the initiative and enthusiasm of teachers to improve their practical ability through institutional reforms such as evaluation system, performance appraisal and professional and technical post evaluation and employment, and take effective incentive measures;

Second, we should improve teachers' practical teaching level in a planned way, and send teachers to relevant enterprises for training, post work and practical exercise according to their disciplines, majors and post characteristics.

Third, we should establish an open and flexible employment mechanism, actively employ outstanding professional and technical talents, management talents and high-skilled talents with high professional quality and rich practical experience from industry enterprises, and build a team of full-time and part-time teachers with dual qualifications and dual abilities to meet the needs of cultivating high-quality applied talents.

5. Conclusions

Based on the needs of talent training in today's society, as a transitional university, we should fully understand the actual connotation of IEVSU and strengthen the reform of teaching mode around the connotation. IEVSU education plays an important role in national economic and social development. It is the most direct and close part of education which is related to economic and social development. It is responsible for training high-quality workers and all kinds of talents with specialized skills. We must actively adapt to the reform and development of new technologies and industries, move forward more firmly on the road of IEVSU, deepen the reform of education and teaching, innovate the talent training mechanism, and cultivate more high-quality applied talents for regional economic and social development, industries and enterprises.

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