

Research on Innovation Management of Higher Vocational Education from the Perspective of Supply-side Reform*

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ABSTRACT

Supply-side reform is an important way to promote economic and social development. This paper analyzes the current situation of higher vocational education development, and solves the problems of talent supply and demand, talent quality, teaching and learning, innovation and inheritance from the aspects of stable employment, innovative teaching mode, and cultivating core competence, so as to effectively deal with the impact of various factors on higher vocational education, continuously improve the adaptability of higher vocational education talent training to social development, and provide a new perspective for promoting higher quality development.

Keywords: *Supply-side reform, Higher vocational education, Innovation management.*

1. INTRODUCTION

In the new era, with the rapid development of the economy and the rapid development of science and technology, the industrial structure has been continuously optimized and upgraded, and new agriculture, new equipment, new services and new formats have emerged. As a form of education closely related to the social economy, higher vocational education should actively adapt to these changes and carry out innovative management in professional construction, talent training, service innovation and other aspects. The supply-side reform advocates grasping the main contradictions and basic problems, grasping the essence of the problem, focusing on promoting the formation of new supply and new demand, and providing a new perspective for the innovation management of higher vocational education.

Supply-side reform refers to starting from improving the quality of supply, using reforms to

promote structural adjustment, correcting the imbalance in the allocation of factors, expanding effective supply, improving the adaptability and flexibility of the supply structure to changes in demand, improving total factor productivity, and meeting the needs of the vast majority of people. Supply and demand are a dialectical relationship that is both opposite and unified. Without demand, supply cannot be realized, and new demand can give birth to new supply; without supply, demand cannot be satisfied, and new supply can create new demand.

The supply-side reform of vocational education starts from improving the quality of talent supply, uses reform methods to promote the adjustment of talent structure and employment structure, and expands the effective supply of talents to meet the requirements of economic development for talents and meet the needs of economic society and enterprises for talents demand better, and promote the sustainable and healthy development of the economy and society. [1] The supply-side reform of vocational education is to provide high-tech skilled personnel to meet the needs of the society, and at the same time to promote its own high-quality development.

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2. ANALYSIS OF THE CURRENT SITUATION

The development of higher vocational education needs to clarify the current situation from the perspective of supply-side reform and reform, focus on problems, and lay a foundation for improving the quality of higher vocational education, expanding the effective supply of higher vocational education, and realizing the sustainable development of higher vocational students.

2.1 The Problem of Talent Supply and Demand

At present, higher vocational education is faced with the problem of talent supply and demand. On the one hand, there is a serious shortage of applied and skilled talents in the social needs, and on the other hand, the cultivated talents cannot meet the needs of social development.

At present, the supply of talents in some industries is in short supply, especially the strong demand in the tertiary industry. New demand requires new supply, but employment-oriented higher vocational education has a relative surplus of graduates. The relative surplus is mainly due to the mismatch of the professional supply and demand structure. Some higher vocational colleges are not clear about the positioning of talents, lack of problem-oriented awareness, lack of scientific demonstration and market research, resulting in a disconnect between the supply of talents and social needs.

Some higher vocational colleges have a vague understanding of the characteristics of higher vocational education, and do not know much about the training objectives of higher vocational colleges to cultivate applied talents. They copy the mindset and methods of research-oriented undergraduate colleges to cultivate talents. As a result, these higher vocational colleges lack the power mechanism for sustainable development, lack the overall design for future development, and fail to show their own school-running characteristics and competitiveness. Some higher vocational colleges unilaterally focus on a single skill training and pay too much attention to repetitive training completed in a short time, which will lead to the weakening of learning potential, innovation ability and cultural empathy in the long run.

Because some higher vocational colleges have been unable to meet the growing economic and

social needs in cultivating talents, and there is too much ineffective supply and insufficient effective supply, some students cannot find suitable jobs. With the development of the country's economy and society, it is necessary to focus on the supply side to promote the optimization of the industrial structure and the transformation of the economic development mode. At the same time, higher requirements are placed on the quality of production factors such as human resources and science and technology. [2] As the supply side of social demand, colleges and universities must be based on problem orientation and overcome the mismatch between supply and demand. Supply-side reform finds new demands and raises questions on the basis of industry development trends, which can help higher vocational education get rid of the traditional thinking of seeking students and employment as soon as possible, and provide a new perspective of its school-running characteristics creating demand through the supply of high-quality talents. In this way, we examine the problem of personnel training in higher vocational colleges.

2.2 The Problem of the Talent Quality

Higher vocational education is also facing the contradiction between the expansion of scale and the quality of training. In recent years, on the one hand, the scale of higher vocational education has expanded rapidly in the short term, on the other hand, due to the span is too large, higher vocational education is not prepared, and the connotative development cannot be promoted in time, resulting in the problems between enrollment, talent quality and employment cannot be effectively resolved. For example, some higher vocational colleges blindly pursue utilitarianism, ignore the cultivation of students' comprehensive quality, and do not fully consider the long-term development of students. The lack of positive interaction between some industry enterprises and higher vocational colleges leads to the disconnection between the theory and practice learned by students. Some higher vocational colleges' teaching reform is often a mere formality, and they only think that the teaching reform has been achieved with the help of information technology, without in-depth thinking from the teaching content, methods and means, nor the organic integration of traditional teaching and modern teaching, which is not of substantial help to talent training. In the final analysis, these have affected the talent quality of higher vocational education and the adaptability of supply and demand to a certain extent.

In recent years, the college entrance examination enrollment expansion has directly faced the problem of reducing the number of students, and the student union has diversified choices, such as studying and employment, which has alleviated the pressure of enrollment to a certain extent. However, in order to attract students, some higher vocational colleges have reduced the threshold of enrollment, resulting in uneven sources of students, decreased learning motivation, decreased academic performance year by year, poor self-discipline ability and so on, which have brought challenges to higher vocational education. There is also a contradiction between supply and demand between educational content and students' needs in higher vocational education. Some general textbook systems are highly general, theoretical and unified, while the needs of students are diverse and personalized. If we can't realize the transformation from textbook content to teaching system, it will only lead to the inefficient state of higher vocational education by reading from the book.

As a demand side aspect, higher vocational colleges have the need to attract high-quality students and enhance their attractiveness. As a supply side, higher vocational colleges should improve the level and quality of talent training to meet the needs of social development, and strive for survival and development with connotative advantages. From the perspective of supply side reform, the mismatch between supply and demand is rooted in the imbalance of talent training quality in higher vocational education. Higher vocational colleges should pay more attention to the adjustment of professional structure and improve input-output efficiency. Supply side reform requires facing the essence of the problem directly, forcing higher vocational colleges to re-examine the quality of talent training.

2.3 The Problem of Mutual Promotion Between Teaching and Learning

The supply and demand of talents have promoted the new reform of higher vocational education. There is often a contradiction between teaching and learning in Higher Vocational Colleges: on the one hand, the content of teachers' teaching is not based on the reality of students, not what students want to explore and are interested in, on the other hand, what students want to learn and solve, teachers do not understand, and they can't respond or adapt. Some teachers often teach according to the content of textbooks or their own

knowledge structure, and less consider the actual problems and needs of students. From the perspective of supply side reform, students' needs need have new supply for teachers, so that good interaction can be generated between teachers and students, and supply and demand can be matched and connected, so as to be transformed into new kinetic energy.

Facing the dilemma of teaching and learning, a certain balance needs to be made between the supply side and the demand side. Teachers should have a deep understanding of the actual needs of students and pay attention to the diversity and possibilities of students' development. If we only focus on the supply of teachers and ignore the needs of students, the supply will not meet the needs, and it will also restrict the development of creative thinking to a certain extent. Therefore, this requires teachers to have a strong problem awareness and problem orientation, and inspire students' innovative thinking by designing open-ended questions. Teachers need to understand the needs of students through in-depth understanding of students, and actively absorb new ideas and concepts according to the development of the times and new social requirements, and constantly transform new ideas into new teaching designs to create new teaching ideas. At the same time, it is also necessary to find a connection between theoretical guidance and the actual needs of students. As the leader of teaching, teachers should guide students to choose teaching content, strategies, methods and means based on their own actual needs, so that teaching can adapt to the development of students, and teaching and learning can promote each other.

2.4 The Problem of Innovation and Inheritance

There is also a certain contradiction between innovation and inheritance of traditional education and teaching. On the one hand, the development of the new era requires a new concept of higher vocational education, a new path, a new method, and a new cognition. On the other hand, the rapid development and reform of higher vocational education shows insufficient preparation in practice, lack of alertness to the changes in education and teaching models caused by the times, and little knowledge of new knowledge, new paths, and new methods.

Supply-side reform and higher vocational education have inherent logical unity, that is, they

follow the problem orientation in terms of operation concept. With the development of the times, there will be unpredictable problems in both the economic field and the higher vocational education field. The development trend of these problems is also an opportunity for reform and innovation. In higher vocational education, it is required to break through the conventional thinking and have a positive development thinking mode. From the perspective of social environment, contemporary college students are facing a more open, free and diversified society, and the society is full of conflicts and fusions between different cultural value choices. In this environment, students have a more open personality and a broader vision. In order to meet the needs of the times and social development, and cultivate compound application-oriented talents and open-minded talents, higher vocational education needs to reform and innovate teaching concepts, models, and paths. At the same time, the new era also puts forward new and higher requirements for the training of talents in higher vocational education. In traditional education and teaching, there are problems such as insufficient clarity of professional personnel training plans, insufficient standard formulation procedures, and insufficient timely content updates. In the face of new problems, it is necessary to further clarify the requirements and guide the norms.

Especially since the enrollment expansion, the situation of students has changed, especially the students who have participated in the work and entered the society before, and their needs are to improve their professional ability through education. This requires higher vocational education to transform the concept of talent training and education and teaching mode, introduce new industry standards according to the requirements of post ability, carry out education and teaching in the mode of integrating theory and practice with real work tasks as the carrier. At the same time, this also puts forward higher requirements for higher vocational teachers. In addition to changing teaching concepts, teachers constantly improve their educational and teaching abilities, and can update their professional and technical levels according to the development of technology, go deep into the front line of enterprises to understand professional ability requirements, and solve practical problems in a real enterprise environment. The content of their own teaching is adapted to the new needs.

3. COUNTERMEASURES

In response to the above problems, from the perspective of supply-side reform, higher vocational education should focus on the problems, accurately analyze the needs of students, accurately meet social needs, and continuously innovate the talent training model, promote the improvement of students' abilities, and achieve an effective supply of talents.

3.1 Focusing on Social Needs To Achieve Stable Employment

The social development has brought new opportunities for higher vocational colleges, and also caused them to face a series of new problems. In the face of new problems, higher vocational colleges need to further clarify requirements, from individual development to coordinated development, to promote stable employment. From the current and future point of view, higher vocational education faces the complexity of employment issues, which requires higher vocational education to further reform and innovate in management, teaching, service and other aspects to stabilize employment.

First of all, higher vocational colleges should seize the exploration point of personal career choice space. To stabilize employment, the first thing is to find out the bottom line and find the right node, such as employment intentions, employment difficulties, and other risks. Focusing on students with employment difficulties and students who have no intention of employment, the school needs to organize personnel to carry out assistance work, come up with solutions, and provide employment services such as career guidance, job promotion, information connection, training promotion, and psychological counseling to ensure stable employment. Some colleges organize students to participate in workplace experience, quality development, and social practice. In addition, the school connects students with career growth mentors, supervises and accompanies students' growth, so as to inspire students to expand more career options.

Secondly, higher vocational colleges should grasp the cooperation point of school-enterprise internship employment. To promote employment, we must firmly grasp the convergence of school-enterprise cooperation resources and seek common development. This requires a statistical analysis based on the development of students, combined

with the professional system and the adaptability of the industrial structure, to identify the target positioning of higher vocational colleges. Under the background of supply-side structural reform, the demand and supply are seamlessly connected, and the needs of industry enterprises are investigated to promote the reform and development of vocational education and school-enterprise cooperation models, and to achieve a dynamic balance between the needs of social industry enterprises and the supply of vocational colleges. [3]

The development of higher vocational education is also a process of promoting multi-subject joint education. Therefore, the development of higher vocational education is to promote the overall development of skills training, social services, employment and entrepreneurship and other subjects from the synergistic level. On the basis of the joint education of schools and enterprises, it is necessary to mobilize the active role of enterprises in promoting employment, and form a cooperative community that is closely linked with schools and enterprises. Focusing on the direction of career development, it is necessary to integrate resources, stimulate vitality, and take an active role in promoting employment. We should pay attention to the ability of communication and cooperation, especially the ability to connect resources, and design professional enterprise services for students based on the actual needs of enterprises.

Thirdly, higher vocational colleges should consider the precise point of the employment guidance and the employment target. From the first year's academic analysis and employment guidance to the second year's career research project, the diagnosis project to the third year's employment practice guidance, we can provide classified guidance and improve the employment guidance curriculum system. We need to set up special lectures on employment guidance, establish a career planning studio, and set up two-level employment consulting service telephones for colleges and universities. In addition, teachers can give full play to their professional advantages and tap professional resources, provide students with diversified, personalized and differentiated employment services according to their employment needs, and actively promote employment.

3.2 Innovating the Talent Training Model To Improve the Quality of Education

From the perspective of supply-side reform, the root cause of the mismatch between supply and demand is the imbalance in the quality of personnel training in higher vocational education. Higher vocational colleges should pay more attention to the adjustment of professional structure and improve the efficiency of input and output. Modern society is a society of high-tech competition. The survival and development of enterprises depends on the production of products and services with high added value. To do this, schools need to cultivate high-tech talents with good craftsmanship and creativity.

Education should serve the overall situation. The key to improving education services under the new situation lies in talent training. The key measure to solve the contradiction is to build a modern economic system with the connotative development of vocational education. [4] In the orientation of talent training, teaching should clarify the theoretical basis, knowledge system, professional ability and technical skill accumulation of vocational education at different levels, and build the integration and docking of talent training at different levels to meet the needs of society for technical and skilled talents at different levels.

With the implementation of the supply side reform, the talent training of higher vocational education should be closely linked with the development of the industry and enterprises, and adapt to the social development trend.[5] In addition to changing the teaching concept and constantly improving the education and teaching ability, teachers can update their professional and technical level according to the development of technology, go deep into the front line of enterprises to understand the requirements of professional ability, and have the ability to solve practical problems and innovate in the real enterprise environment, so as to adapt their teaching content to the new needs. College teachers should pay attention to changing their thinking ideologically. Classroom education based on single knowledge teaching should turn to diversified education. They should continue to innovate in professional construction, talent training, social services and other aspects, educate people in the first classroom, practical classroom and campus life, promote the cross integration between majors, and build a cross domain integrated curriculum system.

3.3 Cultivating Core Professional Ability To Promote Students' Development

In order to achieve its goals and tasks, higher vocational education takes the cultivation of students' ability as the main line. The ability training here mainly refers to the potential professional ability, including its professional knowledge and skills, professional quality, behavior, ability and attitude in different work situations and tasks.

From the perspective of supply side reform, it is necessary to cultivate students' vocational ability to match their employment positions, so that the demand for vocational ability can be closer to their own reality and the needs of social development. With the rapid development of new technology, it is an important work to design based on the trend of future career development. Higher vocational colleges need to pay attention to the development of students' cultivation education and comprehensive quality, cultivate students' non professional practical ability, put enterprise culture and craftsman spirit into the quality goal of teaching, and improve the matching of students' comprehensive quality and professional quality.

Higher vocational colleges can cultivate students' core vocational ability through social practice, simulation experiments, model methods and other ways, and can also jointly cultivate students' core vocational ability. From simulated problem solving to actual career problem solving is a transitional link from school learning to entering the workplace. Problem solving training is realistic, comprehensive and rich, so it helps to overcome the singleness and one-sided of other ability training methods in function. In the long run, the cultivation of vocational core competence can find more employment opportunities for students. Students can not only obtain employment in their professional fields, but also transfer their abilities in their professional fields.

3.4 Using Modern Information Technology To Promote the Interconnection of Education

With the rapid development of information technology, new industries continue to emerge, and these have promoted the emergence of different new interdisciplinary. This requires making full preparations before new changes, exploring various forms of new industries, new formats, new modes of employment, and constantly meeting the new

needs of society through the training of compound talents. All kinds of skilled and compound talents promote the development of new industries through the combination of online and offline. Higher vocational education should present the teaching content in a multidimensional way based on the characteristics of students' academic burnout psychology, concrete thinking, practical needs and so on, relying on Internet technology; simulate the professional environment through experiential courses; and strengthen the combination of theoretical knowledge and practical ability by using post practice. [6]

The Internet has broken the traditional restrictions of time and space, and the teaching mode has also undergone revolutionary changes. How can vocational education choose resources suitable for students from many resources, how to use the Internet to carry out multi-directional interactive exchanges with students for online and offline problems, and how to link with lifelong education? This needs to be analyzed from the perspective of supply side reform. Using modern information technology can better understand the needs of students and provide a variety of educational ways. On the basis of the interconnection of talent needs, higher vocational colleges can integrate and optimize information and build accurate growth and employment services, so as to improve the matching degree between students' employment and interests, professional training objectives, and social needs, including accurately grasping the direction, accurately understanding information, accurately pushing information, and accurately docking. According to the types of difficulties, we should take measures according to the place and people, diagnose the causes of difficulties in study and employment, and formulate targeted assistance programs. In addition, higher vocational colleges need to establish a linkage mechanism with the government and industry enterprises. Clarify the medium and long-term planning of regional talent demand, and collect the development trends of the industry, especially the demand for talent positions in short supply, so as to timely adjust the talent training program and enhance employment competitiveness.

4. CONCLUSION

As a cross-border education across many fields, the development of higher vocational education is closely related to politics, economy, culture, society, history and so on. Its participants also show a trend

of diversification. The in-depth study of its reform and development must establish a research awareness of cross domain issues. From the perspective of supply-side reform, providing a new perspective for the innovative management of higher vocational education will help to better examine the problems of higher vocational education, grasp the key to the problems, and find solutions to the problems, so as to promote the high-quality development of higher vocational education.

AUTHORS' CONTRIBUTIONS

Zhengqiang Wu is responsible for overall design and wrote the manuscript, and Fenghua Kang contributed to revising and editing.

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