

Research on the Development Strategy of International Cooperation in Running Higher Vocational Colleges ----Taking the Sino-German Cooperation in Running Schools in the Area of Vocational Education as an Example

Yanfang Zhang^{1,a}, Xuezhou Zhang^{2,b}, Lin Chang^{3,c}

¹Sino-German Institute, Yunnan Communications Vocational and Technical College, Yunnan, China

²School of International Business, Yunnan University of Finance and Economics, Yunnan, China

³Sino-German Institute, Yunnan Communications Vocational and Technical College, Yunnan, China

Abstract. With the continuous development of economic globalization, the trend of strengthening international exchanges and cooperation and introducing high-quality international education resources is becoming more and more obvious. Exploring a reasonable mode of international cooperation in running higher vocational colleges is not only conducive to promoting the development of higher vocational colleges, but also conducive to enhancing the international competitiveness of China's higher education.

1 INTRODUCTION

Since the 19th National Congress of the Communist Party of China, vocational education has been placed in an unprecedented prominent position, and a series of decisions have been made, which emblemizing that China's vocational education has entered a new era of development. Higher vocational colleges should find out the right position, define their development direction, seek new development opportunities, and carry out foreign exchanges and cooperation. On the one hand, we should introduce excellent foreign educational and teaching resources; on the other hand, we should combine our own characteristics to carry out foreign exchange activities and export educational resources, so as to further promote the internationalization of higher vocational colleges. Thus, to form a group of high-level personnel training, specialty construction, teachers, social services, internal management and campus culture, and a new pattern of vocational education development will be formed that resonates with the national major development strategy and adapts to the regional industrial structure and economic development. In order to meet the needs of local economic and social development, promote the overall transformation and development of Yunnan Communications Vocational and Technical College, and promote the achievement of the development goals of high-level industrial service-oriented vocational colleges with "distinctive characteristics, first-class in China, and advanced in the world". In accordance with the spirit of the "Cooperation Agreement between Yunnan Provincial Department of Education and Tongji University", Yunnan

Communications Vocational and Technical College and the Sino-German Vocational Education Alliance of Tongji University have carried out an international cooperative school running mode, hoping to introduce and absorb high-quality educational resources of foreign universities, further promote the reform of education and the process of education internationalization, and benchmark the specifications of foreign university construction and advanced training concepts, curriculum systems and teaching methods, clarify the orientation of international development, analyze the problems existing in its own international construction, formulate corresponding international development strategies, cultivate international, compound and innovative senior professionals, promote the development of higher education, and serve the local and regional economic construction.

2 Literature Review

2.1 Research on the Current Situation and Motivation of International Exchange and Cooperation in Higher Vocational Colleges

As for the research on the current situation of international exchange and cooperation in vocational colleges, researchers mainly focus on the analysis of the current situation of international exchange and cooperation in local vocational colleges. Hu (2017) introduced that the demonstration project of Sino-foreign cooperation in running schools in vocational colleges in Jiangsu Province

^a25449408@qq.com, ^b332996712@qq.com, ^c569092862@qq.com

has played an obvious supporting role in promoting the popularity of the school, expanding the space for specialty development, teaching quality and boosting local economic development. However, there are also problems such as relatively lagging policies and regulations, weak guidance and the teaching evaluation system need to be improved. Zhang (2016) claimed that many higher vocational colleges are lack of understanding, eager to achieve, or even regardless of cost, which makes it difficult to share the existing difficulties of international achievements with students. Regarding the research on the motivation of international exchange and cooperation in education, Wang (2007) believes that the motivation of international exchange and cooperation mainly includes the following six aspects: the promotion of economic globalization, the driving force of domestic education market competition pressure, the driving force of scientific and technological factors, the impact of cultural exchanges, the driving force of economic factors and the demand for the development of higher education itself.

2.2 Research on the Approaches and Mechanisms of International Exchange and Cooperation in Higher Vocational Colleges

Hu (2015) proposed effective ways to strengthen international exchanges and cooperation of higher vocational colleges through the principle of proximity, direct cooperation between schools, diversified models and taking the route of brand characteristics. Zhang (2015) believed that to strengthen the international exchange and cooperation mechanism of higher vocational colleges, we should start from four aspects: training international teachers, actively promoting international exchanges of

students, building a multi-level international curriculum system, and creating conditions for running schools abroad. Yang (2014) claimed that the effective ways to improve the international exchange and cooperation effect of higher vocational colleges include cooperative education, cross-border exchange of students, internship and employment, short-term training mode, international exchange and cooperation mode of distance higher vocational education, overseas investigation, inviting foreign experts to teach, etc.

3 Exploration of the Goal of International Cooperation in Higher Vocational Colleges

3.1 Exploring High-Quality International Resources

Adhere to the fundamental task of establishing morality and cultivating people, increase the four understanding courses of understanding oneself, understanding others, understanding China, and understanding the world, combine localized high-quality German resources with the reality of Kunming, Yunnan, adapt to the diversified needs of talents in the new era, closely connect with regional industries, and form distinctive school running characteristics in international cooperation, school enterprise cooperation, etc. of automobile, information, civil engineering and other cooperation majors. The Sino-German Institute will be built into a high-quality, complex and international high-end application talents training highland closely connected with regional industries. (Figure 1)

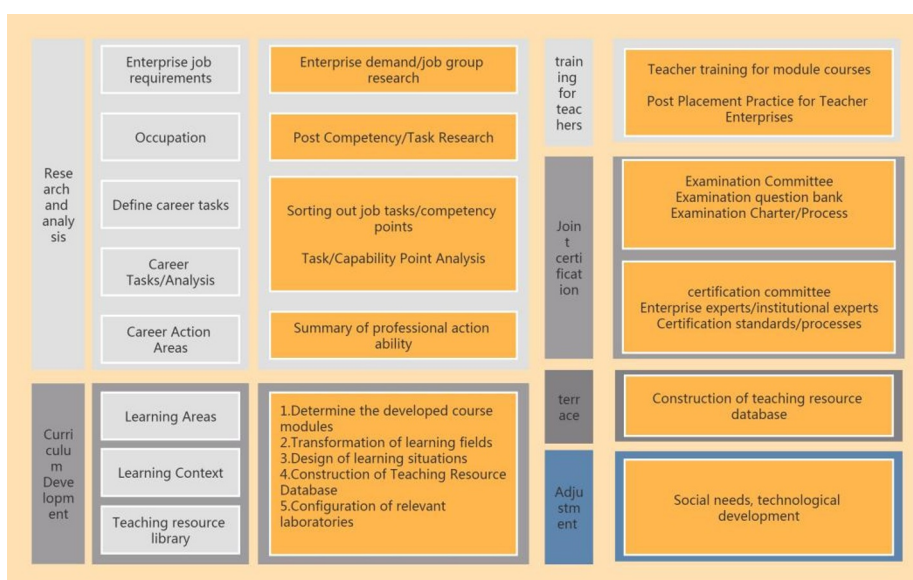


Figure 1 Professional Teaching Model of Sino German College

Establishing a professional teaching model combining theory with practice, guide practice with theory, and verify and apply theory through practice. Jointly build a trinity teaching model of Chinese teachers, German teachers and enterprise experts. The 3+1 mode of training Chinese and foreign cooperative engineers is implemented. The training process of Chinese and German students is to study at home for three years and study abroad for one year. The introduction of a factory-like and forward-looking engineering education model has opened the first "Industry 4.0 - Intelligent Factory Laboratory" in China, providing students with a first-class experimental platform.

3.2 Exploration on the Mode of Diversified Talents Training

In order to meet the requirements for the training of application-oriented talents, schools should cultivate talents based on the dual subjects of school and enterprise, select and apply appropriate teaching methods, stimulate students' professional interest and professional potential, cultivate students' application ability, and make good use of the school and enterprise to carry out teaching.

In terms of talent training mode, we should learn from the successful experience of Germany to form a training mode for engineering talents with Chinese characteristics, strengthen the cooperation between schools and enterprises, and promote the reform of diversified talents training modes for school enterprise cooperation, such as "order type" and "integration type". Firstly, the improvement of each major focuses on the cultivation of practical and innovative abilities, forming a talent training mode in which schools and enterprises cooperate to educate by classroom teaching, practical teaching and the second classroom, and forming the teaching characteristics of "laying the foundation in the classroom, practicing ability, competition and innovation". Therefore, to reach high-quality achievements in competitions, student science and technology projects, etc. Secondly, schools can establish a German learning mechanism to help students break through the language barriers of Sino-German education cooperation. Thirdly, schools vigorously promote the application of the Internet, big data, artificial intelligence, virtual reality and other modern technologies in teaching and management. Besides, schools promote the construction of Massive Open Online Course and virtual simulation experiment. Moreover, schools should focus on students' development, combining majors and strengthening practice to promote students' all-round development. Additionally, promoting the learning revolution by teaching reform, and extending the construction of learning class, mixed teaching, flipped classroom, and build an online and offline teaching model. Finally, schools could strengthen innovation and entrepreneurship guidance and training, give play to the leading role of the "Internet+" competition, promote the construction of smart classrooms, promote the reform of physical education and aesthetic education, strengthen labor education, and promote students' physical and mental health.

4 The Bottleneck and Puzzlement of the Internationalized Development of Higher Vocational Colleges

4.1 The Internationalization of Teachers in Higher Vocational Colleges

The important practice of promoting the internationalization of higher vocational education lies in the need for a large number of teachers with international vision and awareness. From the perspective of the current internationalization activities that conducted by higher vocational colleges, the fundamental reason is that the construction of an international team of teachers is relatively weak. For example, there are quota restrictions for teachers to go overseas for research and study visits, academic exchanges, or to participate in Sino-foreign cooperative projects. Only a few students and a few excellent backbone teachers can participate. This situation indicates that higher vocational colleges are restricted to some extent in the construction of teachers' international teams. At present, the construction of an internationalized higher vocational teacher team that can adapt to running schools needs to be strengthened urgently. The competent education departments and higher vocational colleges should understand internationalization comprehensively rather than unilaterally. A large number of excellent teachers of the school should be sent abroad to carry out professional training, not only to carry out short-term training and exchanges for domestic teachers with foreign experts and foreign teachers, so as to improve the internationalization level of the teachers of higher vocational colleges and improve the quality of international education and teaching.

4.2 Difficult to share international achievements with students

To enable students to benefit from internationalization, they must first consider the employment skills and employment prospects closely related to graduates. Vocational qualification certificate is the "stepping stone" for vocational college graduates to obtain employment. In the international job market, obtaining the professional qualification certificate recognized by the international community becomes the key to the realization of foreign enterprises and even overseas employment. On the whole, the internationalization of most vocational colleges in specific practice is mostly at the primary level, such as sending students out, intercollegiate visits, teacher training, and optimization of teaching resources. In terms of internationalization of talent training, especially in terms of the professional competency standards of graduates, few of them can truly achieve internationalization. And most courses ignore students' practical and innovative ability. Higher vocational colleges should also give more consideration to its feasibility and specific operation methods, so as to seek the benefits of education internationalization for students.

4.3 Ways to realize internationalization of scientific research in higher vocational colleges should to be innovated

Compared with undergraduate colleges, the scientific research work of higher vocational colleges has been lagging behind in terms of emphasis, practical conditions, final results and other aspects. However, the internationalization of higher vocational colleges is inseparable from knowledge innovation and academic research. Most colleges and universities are aware of the importance of internationalization of scientific research, but few are able to participate in international research cooperation, host or host international academic conferences. However, there are limitations in the internationalization of research team members, the internationalization of research funding, the internationalization of research resources, and the internationalization of the publication and application of research achievements in higher vocational colleges.

5 Suggestions for High Quality Development of International Cooperation in Higher Vocational Colleges

5.1 Construction of Teachers for International Cooperative Education in Higher Vocational Colleges

5.1.1 Strengthen the construction of teachers' professional ethics

Schools should explore the characteristics of teacher ethics construction, constantly improve and innovate in content, form, methods, means, mechanisms, etc., guide teachers to enhance their sense of social responsibility, consciously practice the socialist core value system, and promote scientific spirit and professional ethics. Additionally, schools should strictly manage the assessment of teachers' ethics, and create a model of being a teacher, teaching and educating people, with moral character and personal integrity.

5.1.2 Establish a multi-dimensional and collaborative professional construction committee

The government, universities and enterprises should cooperate with each other to learn the German vocational education model. The Sino-German Vocational Education Alliance of Tongji University should be designed to build a guiding committee for the construction of key majors in universities in Yunnan Province. According to the direction of different professional groups, through the leadership of high-level schools and team demonstration, and according to the specific requirements of the national reform of "teaching materials and teaching methods for teachers", the division of labor and cooperation of teacher teams are fully implemented, which radiates and drives the universities across the province to strengthen the

construction of school level innovation teams and professional construction committees, and provides strong teacher support for comprehensively improving the training quality of compound technical and skilled talents in Yunnan Province.

5.1.3 Strengthen the introduction and training of high-level talents

In a planned and focused way, a group of professional backbones with strong dedication and professionalism, high academic and technical level in the professional field, rich basic theories and rich practical experience will be cultivated. Based on the training of featured higher vocational talents, schools could cultivate excellent teaching teams around curriculum construction, and select young and middle-aged backbone teachers to conduct on-the-job training and special training in Tongji University. On one hand, vigorously support young teachers to enter the industry and enterprises through temporary training, social research, participation in project research and development. On the other hand, carry out quality training for dual teachers to improve theoretical teaching level, practical teaching ability, and scientific research and innovation ability, and build a team of dual quality teachers.

5.2 Promoting Technological Collaborative Innovation and Creating a High-Level Technological Service Innovation Platform

Giving full play to the professional and disciplinary advantages of Tongji University, strengthening cooperation with local leading enterprises in Kunming corresponding to the cooperative majors, connecting with German technical experts, cooperating with Tongji experts to build a technology collaborative innovation team with local teachers and local enterprise experts in Kunming. Innovate the mechanism, and build an integrated platform with intensive functions, resource sharing, full openness and efficient operation for universities and enterprises to build School of Yunnan Sino-German into a high-end talent gathering center. And establish a collaborative training mechanism that integrates science and education and promotes each other in combination with the national key and major science and technology planning tasks. Thus, to promote students to enter projects, laboratories and teams earlier, support high-quality undergraduate talent training with high-level scientific research, build a platform for students' scientific practice and innovation and entrepreneurship, promote high-quality teachers and students to create together, and enhance students' innovation spirit and scientific research ability. In a result, by exploring the technology collaborative innovation mode of "commissioned research, joint research and joint incubation" and promoting the construction of the industry university research integration system and mechanism of scientific research service education, aims to form models and experiences that can be popularized and demonstrated, provide experience that can be used for reference for the construction and reform of other specialties, and provide

technical support for the transformation and upgrading of enterprises and high-quality economic development in Kunming and Yunnan.

5.3 Establishing industrial college to create an open school reform pilot area

Schools could deepen integration of production and education and college-enterprise cooperations, strengthen the cooperation with local enterprises, establish industrial colleges, and build a demonstration area for schools and enterprises to collaborate in educating students. At first, starting from information technology majors, schools could cooperate with local enterprises in Kunming, take the institute of industry as the cooperation carrier, deepen school enterprise cooperation and integration of industry and education, and establish an open school system. For instance, adhere to the principles of "school enterprise dual subject teaching", "international school running" and "integration of production, teaching and research", deepen the reform of the management system and operating mechanism of Yunnan Sino-German School, form a diversified collaborative education and school running mode combining professional management team and diversified dual quality teachers, constantly improve the quality of talent training, and achieve the results of teaching and education reform. Moreover, the school could build a cross-border education team for schools and enterprises. Every year, select personnels from enterprise to serve as an "industry professor", so as to achieve in-depth cooperation such as two-way exchange of personnel and joint construction and sharing of technology. Enterprise personnel teach applied and practical courses to teachers and students, teach enterprise culture and process skills, participate in professional construction, guide students to find jobs and start businesses, and build a close connection between talent training and job requirements. At the same time, in order to track the forefront of industry development and carry out research cooperation by practicing, scientific and technological services, enterprise temporary employment and other forms, the school could select outstanding teachers to train and work in enterprises every year and set up industry research teams. Those selected teachers also can assist enterprises to solve technical problems, participate in business process reengineering, update teaching content, and establish and improve the long-term mechanism of school enterprise dual main body joint training and cultivation of talents.

6 Conclusion

Internationalization of education has become a major trend in the development of world education, and international exchanges and cooperation are an important path for education to achieve internationalization. Therefore, higher vocational colleges should change from cultivating high-quality skilled talents to cultivating skilled talents with international quality. From the purpose of international cooperation of higher vocational colleges as the research theme, this paper finds that there are a series of problems in the process of internationalization of higher

vocational colleges, such as insufficient scientific research ability of higher vocational colleges, difficulties for students to share achievements, and insufficient international teachers. At last, some suggestions are given on improving the level of international cooperation in higher vocational colleges from the three levels of higher vocational colleges, teachers and students to enhance the influence of international cooperation in higher vocational colleges.

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