

Thoughts on Promoting the Construction of Industrial College in Applied Undergraduate Colleges*

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Abstract—In order to adapt to the requirements of new business and innovation-driven development, some undergraduate colleges have transformed into applied undergraduate colleges. The construction of applied undergraduate colleges is an important guarantee for the transformation of applied-oriented undergraduate colleges. The construction of industrial colleges in applied undergraduate colleges should promote the application of the level of service, the construction of service disciplines, the promotion of service faculty, the innovation of service personnel training, the service of student growth and innovation and entrepreneurship as the fundamental tasks of the construction of industrial colleges, so that the quality of talent training is improved.

Keywords—*applied undergraduate colleges; integration of production and education; construction of industrial colleges*

I. INTRODUCTION

The Ministry of Education, the National Development and Reform Commission, and the Ministry of Finance's "Guiding Opinions on Guiding the Transformation of Some Local Undergraduate Universities to Applied Types" (Teaching [2015] No. 7) requires further promotion of the integration of production and education, and the promotion of school-to-application transformation. To give full play to the school's service, local industry-university-research cooperation platform and its advantages in running schools, in order to fully implement the spirit of the document, all applied undergraduate colleges and universities have adopted a diversified school-running model of "preferred majors (groups) + industry colleges" "to actively solve local economic development. The practical problems are oriented, breaking professional discipline barriers, opening up results transfer and application, extensively carrying out service innovation activities, bringing together the superior resources of the partners into the industrial colleges, accurately participating in the whole process of talent cultivation, and playing the main role of the cooperative partners in educating people.

II. THE CONCEPT OF THE CONSTRUCTION OF AN APPLIED UNDERGRADUATE COLLEGE

Undergraduate colleges study and implement the spirit of the 19th National Congress of the Communist Party of China, based on educating people, adhere to the correct direction of running schools, aim to deepen the integration of education and education, and build the industrial college of undergraduate colleges application by co-construction, co-management, sharing, win-win and sustainability. The construction of industrial colleges should be based on the "college" education standard, adhere to the correct direction of running schools, aim at deepening the integration of production and education, school-enterprise cooperation, and take the innovative talent training mode and improve the quality of personnel training as the fundamental task to jointly build, co-manage and share. Win-win is the basic principle. It is oriented to the needs of regional or industrial enterprises. It deeply integrates resources inside and outside the school, innovates the school-running mechanism and talent training model, forms a sustainable and scalable talent training feature, and enhances the influence of schools and disciplines, competitiveness.

III. THE MODE OF CONSTRUCTION OF APPLIED UNDERGRADUATE COLLEGES

Minister Chen Baosheng emphasized at the 2017 National Education Work Conference that "the implementation of a good university-industry-integrated and applied university construction project, the simultaneous promotion of project construction and transformation and reform, and the practical transfer of school-running to serve local economic and social development, and transfer to the integration of production and education School-enterprise cooperation has come to the training of applied and technical-skilled talents, and has been transferred to enhance students' ability to work and start businesses. The relevant departments have actively promoted the integration of production and education policies, strengthened demonstration and guidance, and promoted the development of experience and effectiveness. The Fujian Provincial Department of Education actively responded to the spirit of the National Education Work Conference, in September 2017, the "Notice on Doing a Good Job in the Selection of Demonstration Industry Colleges" was issued, and in November Issued the "Notice of the Fujian Provincial

*Fund Project: The 13th Five-year Plan for Education Science in Fujian Province 2017 General Project: Thoughts on the Construction of Applied Undergraduate Universities to Promote the Construction of Industrial Colleges (Project Approval Number: FJKCG17-043).

Department of Education on the Announcement of the 2017 List of Demonstrative Industries” announced the Zijin Mining Institute of Fuzhou University, the Anxi Tea College of Fujian Agriculture and Forestry University, the special machinery of Longyan Equipment College, Wuyi College Shengnong Food College, Sanming College - ZTE ICT College .

A. Construction Mode of Industrial Colleges and Universities

Fuzhou University Zijin Mining College was co-founded by Fuzhou University and Zijin Mining Group Co., Ltd. on June 6, 2007. The college established a council composed of representatives from both schools and schools. The college is divided into Qishan Campus (headquarters) and Hangzhou Campus has two campuses. Qishan Campus (headquarters) Zijinlou invested more than 20 million yuan (including 10 million yuan for Zijin Mining Group donation), with a construction area of about 8,000 square meters, and 22 professional laboratories such as Fujian Mineral Resources Center Laboratory, Earth Science specimens Laboratory (1 Geology and Minerals Museum, Zijin Mining Institute, Fuzhou University). As a “national engineering practice center”, Shanghang Teaching Base is built by Zijin Mining Group Co., Ltd. with an investment of 150 million yuan. The base covers an area of 51,831 square meters and the campus construction area is 38,373 square meters. It has 6 professional laboratories.

Wuyi College Shengnong Food College donated 200 million yuan by Shengnong Group and Wuyi College co-founded a school-enterprise cooperation to build a first-class domestic and domestic province that integrates personnel training, food safety testing, food deep processing research and technology incubation. It is an influential industrial college. Wuyi College will leverage the advantages of disciplines and talents of the existing food professional group to meet the development needs of the food industry chain of Nanping City's 100 billion ecological food industries, and strive to cultivate a complete process of regional economic and social development, service food production and applied talents in the food industry.

Sanming College-Zhongxing ICT College was founded by Sanming College and ZTE Corporation to build an ICT curriculum group and curriculum system featuring application-oriented, practical and skill-based curriculum modules, and jointly build three grades of “level protection curriculum system construction”. The Ministry of Education, Industry-University Cooperation and Collaborative Education Project Research, has a national two-integrated management system, the standard consulting service organization, the Fujian Provincial Agricultural Internet of Things Application Key Laboratory, the Internet of Things technology application, the Fujian University Engineering Research Center, and the Fujian Provincial Key Laboratory School-enterprise cooperation industry colleges such as the national and provincial teaching and research platforms.

B. Construction Mode of Industrial Colleges and Universities

Fujian Agriculture and Forestry University Anxi Tea College was founded by the Anxi County Government and Fujian Agriculture and Forestry University. The college has a total investment of 500 million yuan and is located in the urban area of Anxi County. The planned area is 1200 mu. The development of the Tea Academy requires strong professional talents and technical support. Anxi Tea College has the strong teaching force and scientific research level of Fujian Agriculture and Forestry University to provide services and support for its school. Fujian Agriculture and Forestry University's advantages in tea teaching, scientific research, and personnel training are combined with Anxi's position as the hometown of China's Oolong Tea Tieguanyin. The school and the two sides strive to co-found the industrial college.

C. Construction Mode of Industrial Colleges and Universities

Longyan College's predecessor is the Longgong College jointly established by Longyan College and China Longgong Holdings Co., Ltd. in May 2009. After that, Longyan College and Fujian Longjing Environmental Protection Co., Ltd. and Fujian Longma Environmental Protection Equipment Co., Ltd. The company cooperated to establish Longjing (Environmental Protection) Industry College and Fulongma Industry College. With the support of Longyan City Economic and Information Committee, it integrates Longgong College, Longjing (Environmental Protection) Industry College, Fulongma Industry College, and establishes a special mechanical equipment college, which has become an industrial college of political school and enterprise collaboration. Longyan Municipal Government invested 51.5 million yuan in special funds for the construction of public service platform, research and integration of production and education (Longyan University Science and Technology Park); the school invested more than 20 million yuan for the construction of equipment conditions of the special mechanical equipment college; Longgong Group, Longjing Environmental Protection, Fulongma and other enterprises allocated 1,000 square meters of space and nearly 20 million yuan of equipment for the special mechanical equipment college. In order to promote the cooperation between political schools and enterprises and serve the development of the local economy, Longyan College and Longyan Municipal Government and related enterprises have jointly established the “Qimai Technology Innovation Fund” in a ratio of 1:1:1, which is effective in accelerating enterprise technology. The demand for the output of research and development results is in line with the construction of the “double-skilled and dual-energy” type of teachers in the transformation and development of the school. At the same time, the government has achieved the goal of economic and social development due to the transformation and upgrading of the enterprise, forming a government, school, and enterprise “political school” collaborative industry college.

IV. THE FIVE FUNDAMENTAL TASKS OF THE CONSTRUCTION OF APPLIED UNDERGRADUATE COLLEGES

A. Improvement of Service Level

The classification of higher education institutions has become increasingly clear, and the construction of high-level applied universities has become the basic orientation of applied undergraduate universities. For an application-oriented undergraduate college to achieve a successful transformation of the application type, an important way is to establish an industrial college. As a new organizational form, the Industrial College has become an important organizational guarantee for the transformation and development of applied undergraduate colleges. The establishment of industrial colleges of applied undergraduate colleges should give full play to the advantages of industrial colleges, promote the integration of production and education, cooperation between schools and enterprises through platform construction, closely follow the industrial needs in personnel training and scientific research, set the standards for training talents with industry needs, and study the industry. The problems in development, access to more resources for running schools, and the formation of a benign development of talent cultivation, scientific and technological development and social services have promoted the improvement of the running level of applied undergraduate colleges and universities.

B. Construction of Service Disciplines

Strengthening the construction of disciplines is an important foundation for improving the quality of personnel training, the level of scientific research and the ability to serve the society. It is the leading and main line of the overall development of applied undergraduate universities, and is the core project for the comprehensive development of applied undergraduate colleges. Applied undergraduate colleges have long been aware of the importance of integrating discipline construction into the construction of industrial colleges, correctly grasping the ideas and directions of discipline construction, taking the road of quality and characteristics, raising the level of connotation, promoting development with characteristics, and finding a good position. The entry point, the foothold, and the focus of the development of the subject profession truly integrate the essence of the scientific thinking of the construction of the industrial college and the essence of the concept into all aspects of the discipline construction, and run through the whole process of the discipline construction, giving full play to the industrial college. It plays an active and important role in the construction of disciplines in applied undergraduate colleges.

C. Serving the Promotion of the Teaching Staff

The construction of applied undergraduate colleges of industrial colleges is a bridge between applied undergraduate college teachers and industrial talents. Improving the level of applied undergraduate college teachers should be an important part of the construction of industrial colleges. The faculty of applied undergraduate colleges can participate in

collaborative enterprise project research, help enterprises solve technical research and development, technical service problems, and provide services for enterprises. At the same time, the enterprise project provides a platform for practical undergraduate college teachers to practice their practical ability, promote the development of the "double-skilled and dual-energy" type of teachers in applied undergraduate colleges, and improve the practical ability of their faculty.

D. Innovation in the Training of Service Personnel

Undergraduate colleges attach great importance to the innovation of talent training mode in terms of talent training. From the original "work-study combination" talent training mode to the current "integration of education and education", the talent training mode of industrial colleges fully reflects the application of undergraduate colleges. Undergraduate colleges pay attention to the reform and innovation of personnel training model. With the deepening of school-enterprise cooperation, the establishment of an industrial college integrating production and education has become one of the commonly used talent training models in applied undergraduate colleges. The talent training model of industrial colleges with production and education is different from the traditional talent training model. On the basis of the advanced experience of the foreign-industry-industry-integrated personnel training model, such as the United States, the United Kingdom, and Germany, the national conditions of China, the situation of the industrial colleges, and the academic conditions of the students in each school should be fully considered, and the positions of the enterprises to arrange the teaching content and courses should be closely combined. To enhance students' comprehensive quality and innovative ability, they pay more attention to the dynamic changes of the industry, keep up with the times and social development, pay more attention to the cultivation of students' practical ability and innovative ability, and continuously innovate the talent training mode.

E. Serving Student Growth and Innovation

The application-oriented undergraduate colleges are based on the cultivation of applied talents. The student growth and innovation and entrepreneurship education are in line with the application of undergraduate colleges and universities, and also meet the requirements of higher education popularization and socialist market economy development. The application-oriented undergraduate colleges of industry should establish new educational concepts and methods that clearly serve the growth of college students and innovation and entrepreneurship education, and cultivate college students' innovative spirit, innovative consciousness, innovative thinking, creative vitality and entrepreneurial ability, etc., to promote the growth of applied undergraduate college students, to achieve the connotative development of applied undergraduate colleges.

V. CONCLUSION

The Industrial College aims at the needs of enterprises and is a new mode for promoting the cooperation between

schools and enterprises in applied undergraduate universities. It is a platform for regional and industry development services, an important way to cultivate applied and innovative talents, and an application-oriented undergraduate university. An important way to run a comprehensive strength and core competitiveness is to help deepen industry-university cooperation, integration of production and education, school-enterprise cooperation, and collaborative education, enhance students' employment, entrepreneurship and innovation capabilities, and promote the close integration of talent cultivation and industrial needs.

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