

Exploration and Practice of Effectively Improving the Quality of Practical Education in Applied Undergraduate Colleges

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Abstract. Practice is the only criterion to test truth and an important means to cultivate talents. The effect of practical education will directly affect the quality of applied talents training. How to strengthen the effectiveness of practical education and improve the quality of practical education is a problem that application-oriented undergraduate colleges must face in the process of personnel training. We should recognize the importance of overall planning and top-level design, adhere to demand-oriented practical education, pay attention to the role of innovation and entrepreneurship education in practical education, and avoid a one-size-fits-all management model.

Keywords: Top-Level Design; Collaborative Education; Innovation and Entrepreneurship; Demand-Oriented.

1. Introduction

Practice is the only criterion to test truth and an important means to cultivate talents. To carry out practical education is not only the need to promote the unity of knowledge and practice among college students, but also the need to implement the Party's educational policies and policies, and also the need to train new people of the times.[6] Socialism with Chinese characteristics has entered a new era. The development and construction of the new era need the support of a large number of high-quality applied talents. The effect of practical education will directly affect the quality of applied talents training. Therefore, how to strengthen the effectiveness of practical education and improve the quality of practical education is a problem that must be solved in the process of personnel training in Applied Undergraduate colleges. Over the years, the College has insisted on comprehensive planning, combination of release and management, precise implementation and other measures. Through continuous exploration and practice, it has accumulated rich experience in improving the quality of practical education and achieved good results.

2. Adhere to Overall Planning and Attach Importance to Top-Level Design

Any long-term and systematic work, in order to achieve certain results, must do a good job of overall planning and top-level design, both of which are indispensable.

Without a good overall plan, the direction of work is prone to deviations. The top-level design is equivalent to the concretization of the overall planning, which is the specific means to achieve the planning. In the case of only overall planning and no top-level design, it is easy to create a situation where planning stays on paper or each secondary college is running its own affairs, which ultimately leads to a great discount in the effectiveness of practical education.

The College pays great attention to the scientific and forward-looking overall planning of practical education from the overall perspective. Combining with the orientation of "creating first-class innovative universities", we should make a comprehensive plan with capacity-building as the core and Morality-Building as the fundamental task; focusing on deepening the collaborative education of "school-government-enterprise"; taking the demand of regional economic and social development for talent cultivation as the guidance; and strengthening the construction of mechanism and system as the guarantee.

Make the overall plan concrete in all levels and elements, so as to be comprehensive, clear and operable. Effective measures have been taken to build a practical education system, carry out in-depth collaborative education, strengthen the construction of practical education platform, reform contents

and methods, standardize management, improve the quality assurance system, and strengthen the construction of teaching staff, so as to make students' professional skills and comprehensive qualities exercise and improve and become more practical, adaptable, employable and innovative. Consciousness, entrepreneurship and high-quality, innovative and applied talents with family and national sentiments and good moral standards, who have all-round development of morality, intelligence, physical fitness, beauty and labor.

The effect of any single form of education model must be unsatisfactory. Avoid a one-size-fits-all approach in developing overall planning and top-level design. When it comes to the value orientation of practical education, there must be a unified and clear requirement. When it comes to specific issues such as content and methods, each specialty can construct a practical education model that is in line with its own reality and specialty characteristics, reflecting specialty differences, and avoiding the phenomenon that all specialties carry out practical education in the same form.

3. Exploring Diversified Ways of Educating People based on Demand

The way of practical education should change according to the changing needs of the times, society and economic development, and be ready to adjust at any time in order to better adapt to changes and development. According to the idea of "demand docking, specialty docking, curriculum docking and process docking", we should build a practical sports system, and determine the core competitiveness of talent cultivation by combining the needs of enterprises, industry standards and regional economic and social development.

While insisting on the reform of professional education and innovative entrepreneurship education courses, the school also strives to achieve the docking of content and demand in Ideological and political education and public basic education courses. Located in the Pearl River Delta Economic Zone and adjacent to the Zhuhai Aviation Industry Park, in order to better serve the development of local industries, the school carries out professional construction through cross-disciplinary, cross-academic and school-enterprise integration, giving priority to the development of urgently needed specialties such as aviation machinery engineering, cloud computing science and technology. Intelligent manufacturing and automation, new energy and new materials, aviation engineering technology have been built. The major group of university disciplines includes 1 demonstration specialty, 2 characteristic specialties and 7 pilot projects of comprehensive reform of specialties in the training of quality engineering application-oriented talents at provincial level in Guangdong Province.

Seeking diversified ways of practical education, reforming methods and means of practical education, and providing more opportunities for students to think independently, practice independently and solve problems independently. The school has set up 2+2 credit mutual recognition programs (international classes) for finance, international economy and trade, accounting, business administration, Hotel management, English and other six majors; actively set up 14 "minor majors" such as innovative experimental classes in finance; and provide students with rich and diverse educational resources by using information technology and online courses. At present, more than 170 networks have been opened. Public elective courses, up to 30,000 courses per year; the introduction of Tsinghua Education Network Teaching Platform, has been embedded in 6557 national quality courses, 489 micro courses, 451 micro courses, 296 Mu courses, 3296 open courses. The course of military theory, employment guidance, mental health education of College students, innovation and entrepreneurship education are taught in flip-flop classroom mode; ITE (Information Technology Foundation) module teaching is carried out in cooperation with Cisco Network College, and students who study all courses can directly apply for Cisco-related certificates.

4. Deepening Cooperative Education and Creating Different Education Models

It is the consensus of the whole society that applied universities must insist on cooperative education. The Ministry of Education's opinions on speeding up the construction of high-level

undergraduate education and improving the ability of personnel training in an all-round way point out that a new mechanism of cooperative education should be constructed, which integrates all aspects and the whole process. This requires colleges and universities to continue to deepen the practical education work of school administration, administration and enterprises.

Taking the project of innovating and strengthening schools in Guangdong Province as the starting point, the school continuously strengthens the social forces to participate in classroom construction, curriculum construction, professional construction and personnel training program formulation; coordinates the construction of full-time and part-time teachers, supports teachers to work in enterprises and institutions, introduces professionals to teach part-time in schools; carries out the construction of collaborative education projects, and actively declares the "Education Department and School". Cooperative and cooperative education project"develops a higher level and closer cooperative relationship with social forces; establishes a sharing mechanism of resources sharing, talents sharing and results sharing, transforms social high-quality education resources into school education and teaching resources, and timely transforms the latest scientific research achievements into teaching contents; establishes a professional setting evaluation system with the participation of industry and employing units, and gradually develops. Establish dynamic adjustment, early warning and withdrawal mechanism of specialty; introduce third-party data institutions to evaluate students' employment competitiveness and quality, basic working ability, values and core curriculum effectiveness. On the whole, a synergistic education mechanism has been formed, which includes the synergy of training objectives, training quality standards, training quality evaluation, employment, teaching staff, science and education, and student management. It is all-round, full-process and deep-integration, win-win cooperation and open sharing.

While controlling as a whole, we should also consider the characteristics and realities of each major. According to the characteristics of different disciplines and majors, and in accordance with the idea of docking needs, the secondary colleges of the school have formed their own characteristics of collaborative education mode through continuous exploration and practice. For example, the Tourism Institute and the electronic information institute merged deeply with the enterprise, set up talent order classes, formed a chain-like collaborative education system integrating industry and education, and realized the "teaching-practice-employment trinity" mode of practical education; the College of Chemical Engineering and New Energy Materials and the College of Pharmaceutical and Food Sciences have built a sharing platform for basic experimental technology training, simulated production process training and production and RD technology practice., and a collaborative education system of "three modules, five levels and one penetration" is constructed. The "four-in-one talent training model innovation experimental area" of the School of Public Management is also constructed.

5. Practice Education Driven by Innovation and Entrepreneurship Education

Innovation and entrepreneurship education are an important part of practical education system. It is a mode of training students' entrepreneurship thinking and entrepreneurship ability in different stages and levels facing the society. It aims at cultivating talents with the basic qualities of entrepreneurship and innovation. The trained talents have outstanding qualities in innovation consciousness, entrepreneurship and entrepreneurship and innovation ability which is the important path of applied transformation reform.[4] Therefore, we should attach great importance to the cultivation of students' innovation and entrepreneurship ability, provide more opportunities for students to participate in scientific research projects, social practice, competitions and other practical activities, and incorporate innovation and entrepreneurship education and practical courses into the compulsory curriculum system of colleges and universities.[5]

In 2014, the school set up the school's leading group on innovation and entrepreneurship. The Secretary of the Party Committee and the principal of the school were the group leaders. The school formulated the Implementation Plan for Deepening Innovation and Entrepreneurship Education Reform, and built various innovation and entrepreneurship training bases at all levels open to students.

The total area has reached 78,000 square meters. Among them, the area of College Students' entrepreneurship incubation bases has reached 3,500 square meters. Up to now, the base has held eight incubation declarations, successfully stationed in 37 enterprises, 16 incubated enterprises, 12 incubated enterprises, the total turnover of incubated enterprises is nearly 12 million RMB, and won the honors of "Guangdong Innovation and Entrepreneurship Education Demonstration School", "National Public Service Demonstration Platform for Small and Medium-sized Enterprises", "Guangdong Excellent Organizations University Award". "Research and Practice of Creator-Innovation-Entrepreneurship Training Mechanism for Applied Talents of Electronic Information" won the first prize of teaching achievement in Guangdong Province in 2017.

In order to achieve the classified management and face the whole, the school has formulated the "Management Measures for Extracurricular Practice Credit Recognition of College Innovation and Entrepreneurship Education" and "Detailed Rules for the Implementation of College Innovation and Entrepreneurship Practice", and constructed four types of innovative and entrepreneurship education curriculum system, including public compulsory courses, public elective courses, innovative and Entrepreneurship Education and professional education, and extracurricular practice links. Among them, the extracurricular practice of innovation and entrepreneurship education includes all kinds of competitions at all levels, scientific research, invention and creation, social practice, entrepreneurship training practice and other eight categories. Students who study more than required credits can replace the relevant elective credits and be included in the total graduation credits. At the same time, we set up a "college undergraduate entrepreneurship practice transcript" and install student files.

Take the project and competition as the important foothold to test the effectiveness. Since 2014, "Innovation and Entrepreneurship Training Project for College Students" has set up 30 national projects and 170 provincial projects. In the past three years, 568 awards have been awarded at or above the provincial level in various disciplines competitions. Since 2015, the school has won the national "Internet +" College Students' innovation and entrepreneurship competition, the national copper award and 5 provincial gold awards, 2 National University Students' "Challenge Cup" innovation and entrepreneurship competition gold medal 1 and silver award 4, Guangdong province "Internet +" university student innovation and entrepreneurship contest, excellent show organization university and other honors. In the evaluation of innovative talent cultivation and discipline contest of Chinese universities published by China Higher Education Association in 2018, our university ranked first among the similar universities in Guangdong Province, and the academic contest results ranked among the top 25% of the national universities (including world-class universities).

6. Strengthening the Construction and Management of Laboratory and Practice Training Base

Laboratory and practical training base are important carriers of practical education. We should take the initiative to strengthen cooperation with enterprises and industries, plan the construction of professional laboratories and practice bases as a whole, and formulate scientific and standardized construction plans and implementation rules.

In the new era, we should vigorously carry out the construction of virtual simulation experiment and build a laboratory integrating demonstration, advanced and application. Strengthen the construction and management of practice and training bases to ensure that there are enough, high-quality and stable practice and training bases to meet the needs of training professionals. Actively absorb high-quality social resources, vigorously promote interaction and sharing with local, institutes, enterprises and other educational resources, establish a close combination of teaching and scientific research, production, students and society, enterprises are closely linked, various types of practice training bases, and constantly expand students' practice training and innovation and entrepreneurship space.

In the construction of virtual simulation experiment, the school uses the most advanced teaching cloud system in China to build a management virtual simulation practice education platform which integrates professional integration, training expansion and teaching and research application. This

platform organizes nearly 7000 students' training every year, and the grade coverage rate reaches 100%. At the same time, the construction of school-level virtual simulation experimental teaching center has been launched in late 2018. In the construction of practice sites, the total area of all kinds of laboratories built and put into use is about 78,000 square meters, the total value of instruments and equipment is 159 million RMB; 764 school-enterprise cooperative practice training bases; 6 provincial experimental teaching demonstration centers; and 13 provincial college students' off-campus practice teaching bases.

7. Strengthening the Construction of Teaching Staff

To cultivate talents who meet the needs of regional economic and social development, it is necessary to have a team of practical educators with high professional level, strong scientific research level and rich production experience. Therefore, it is necessary to establish a team of teachers with reasonable age structure, title structure and subject knowledge structure, high professional quality and strong practical skills.

Strengthen the training of teachers' practical guidance ability. According to the principle of "dispatching on demand, focusing on training, guaranteeing quality and applying knowledge to practice", teachers are appointed to the front line of production, management, service and scientific research in enterprises and institutions in a planned and purposeful way, so as to understand the advanced technology, management experience, talent demand and the requirement of knowledge and ability structure of talents in enterprises and industries, and to effectively improve teachers' professional practice ability, scientific research innovation ability. Conditional colleges and universities should also encourage teachers to work part-time and start businesses. Up to now, there are 35 part-time entrepreneurs in the college, including Huang Qian and Yan Jiexiong, who are double-creative mentors, who have been selected into the national talent pool of 10,000 excellent innovative entrepreneurship mentors.

Strengthen the construction of out-of-school instructors. In the cooperative units, key professionals with excellent ideological and political quality, rich practical experience and high technical level are selected to serve as out-of-school instructors. Through strengthening internal and external exchanges, we can build a "double-qualified" team with clear division of labor, complementary advantages and full cooperation; through thematic training, work seminars and other forms, we can promote each other's ability and level of continuous improvement; through participating in professional construction, lecturing courses, guiding graduation thesis and graduation practice, we can realize the demand docking of enterprise, industry and school personnel training objectives. In the 2019 graduation thesis, 441 part-time teachers participated in the guidance.

Practical education in Applied Undergraduate Colleges and universities in the new era should keep pace with the general direction of the demand for talent cultivation for regional economic and social development; take school-enterprise cooperation, collaborative education and innovative entrepreneurship education as key work to promote, give full play to the evaluation role of social forces; and integrate the cultivation of innovative and entrepreneurial abilities into the whole process of talent cultivation so as to enable students to cultivate in practice. Creative problem solving ability, enhance students' innovation and entrepreneurship ability, help students to establish a correct view of career choice, understand the truth of empty talk, misleading the country, and practically rejuvenating the country.

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