

Research on the Construction of Practical Teaching System in Application-Oriented Universities under the Internet plus Situation

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Abstract: For Application-oriented Undergraduate Colleges and universities, facing the new requirements of the 14th five year plan and the transformation and upgrading of social and economic development, how to cultivate application-oriented talents and let students master strong practical ability requires the construction of professional practical teaching system in combination with the development law of higher education, the application of new technologies and the background of the times. The construction of practical teaching system should organically combine the professional curriculum construction with the cultivation of students' practical ability, and build a training system that can run through the whole process of undergraduate talent cultivation with the goal of ability cultivation and the carrier of practical curriculum system construction and school enterprise cooperation. The operation of practical teaching system also requires us to pay attention to the classroom teaching management, quality monitoring and evaluation of practical courses and links.

1. The Goal of Practical Teaching is Clear

For application-oriented undergraduate colleges and universities, the construction of practical teaching system should highlight the application-oriented, and the practical teaching objectives should meet the training objectives of undergraduate application-oriented talents, cultivate talents who can serve the regional economic, social and industrial development, and cultivate students' experimental and practical ability, engineering design ability, professional practice ability, scientific research, innovation and entrepreneurship ability. To achieve the practical teaching goal, we must first scientifically formulate the professional talent training plan, the practical teaching should meet the professional construction standards, graduation requirements and industry standards, and widely solicit the opinions of relevant industry enterprises. Secondly, we should set the theme of practical teaching, adhere to the combination of theory with practice, and reflect the training objectives in practical courses and links; finally, practical teaching should run through the whole process of talent training.

2. Constructing a Scientific and Reasonable Practical Teaching Content System

The practical teaching goal is carried by the practical teaching content, so it is very important to build a scientific and reasonable practical teaching content system. Under the overall goal of undergraduate talent training, we should understand all aspects of professional practical teaching, scientifically integrate each linked element, and establish a systematic practical teaching content system.

2.1 Types of Practical Teaching

Practical teachings are divided into three types: course experiment, practice and training and comprehensive practice. Course experiments are the basic part of practical teaching, which mainly cultivates students' experimental practice ability and engineering design ability. Internship and training are mainly part of cultivating students' professional skills, mainly cultivating students' engineering design ability, professional practice ability and scientific research, innovation and entrepreneurship ability, so that students can master professional skills and understand the post responsibilities and current situation of industrial enterprises. Comprehensive practice is the deepening and application part of practical teaching, which mainly cultivates students' engineering design ability, professional practice ability and scientific research, innovation and entrepreneurship ability.

2.2 Practical Teaching Platform

The realization of the main content of practical teaching mainly depends on the practical teaching platform, which can be divided into: on campus practical teaching platform, network practical teaching platform, off campus practical teaching platform and the second classroom platform. The campus practical teaching platform includes the campus laboratory, training room, the practice base, innovation and entrepreneurship center, labor education base, etc. it can meet the needs of most practical teaching venues and is the main embodiment of the construction of practical teaching conditions in colleges and universities. Network practical teaching platform mainly includes virtual simulation experiment teaching platform and various practical teaching network management platforms. It is mainly to solve the problems of high value of practical equipment and dangerous practical projects, carry out virtual practice through the network or improve practical teaching conditions through the network, and realize practical teaching informatization. The off campus practical teaching platform includes off campus practice and training base, off campus mass entrepreneurship and the innovation base, off campus labor education base, etc. it is not only a window to train students to adapt to the society and understand the current situation of industrial enterprises, but also the main position to promote school enterprise cooperation and collaborative education.

2.3 Construction of Practical Teaching Content System

The practical teaching content system consists of five modules: basic practical teaching, professional practical teaching, comprehensive practical teaching, innovative practice and quality development.

Basic practical teaching mainly includes foreign language application training, computer application training, discipline basic training and cognitive practice. It aims at cultivate students'

foreign language application ability, computer application ability, basic skills of discipline basic courses and cognitive social ability. It mainly corresponds to the cultivation of social adaptability of undergraduate applied talents, so that students can adapt to a variety of positions.

Professional practice teaching mainly includes professional experiment, training, the curriculum design and practice. It aims at cultivate students' professional practice skills and application ability of basic professional knowledge. It mainly corresponds to the cultivation of professional basic ability of applied talents, so that students can master professional basic knowledge and skills.

Comprehensive practical teaching mainly includes social practice, graduation (production) practice and graduation design (Thesis), aiming at cultivating students' ability to comprehensively use knowledge to analyze and solve problems and industry post adaptability, so as to exercise students' professional comprehensive ability.

Innovation practice mainly includes innovation and entrepreneurship training programs, scientific research training, discipline competitions and extracurricular scientific and technological activities, aiming at cultivating students' innovative thinking ability and entrepreneurial ability, highlighting students' personality development and improving students' innovative ability.

Quality development mainly includes military training, two course practice, physical training and labor education, aiming at cultivating students' cognitive ability and adaptability to society, improving students' comprehensive quality and promoting students' personality development.

3. Construction of practical teaching guarantee system

For Application-oriented Undergraduate Colleges and universities, practical teaching undertakes the key mission of cultivating students' application ability. We should not only work hard on the construction of practical teaching content system, but also pay attention to the construction of practical teaching guarantee system, work on condition construction and standardized management, and constantly improve the level and quality of practical teaching.

3.1 Strengthening the Construction of Practical Teaching Conditions

The proportion of practical teaching in Application-oriented Undergraduate Colleges and universities is large, which requires colleges and universities to increase the investment in the construction of practical teaching conditions and build sufficient practical teaching places, including public course laboratory, professional basic course experiment, professional laboratory, on-campus practice and training base, on-campus double creation base, off-campus practice base, etc. The school is required to raise funds in many aspects, ensure the investment in the software and hardware construction of practical teaching places, and increase the investment in the maintenance of practical teaching. First, the quantity should be enough to meet the teaching needs, so that all students can be covered; second, we should form a circular mode of construction and elimination to ensure that the base can be continuously updated and better serve practical teaching; third, we should strive to strengthen school enterprise cooperation on the basis of base construction and carry out practical teaching by using enterprise resources.

3.2 Cultivation of Applied Talents

The training of applied talents refers to the talents who can apply their professional technology and theory to production and life after being trained by the school. This requires colleges and universities to make great efforts in production, teaching, research and application, closely follow

the regional economic development and industrial development, combine college teaching, scientific research and enterprise development, and realize the large-scale and industrialization of college technology. Especially with the revolution of information technology and the reform of industry 4.0, colleges and universities should accelerate the reform of practical teaching and improve the training quality of applied talents.

3.3 Explore a New Mode of School Enterprise Cooperation

In order to adapt to the economic and social development of regional economy and industrial enterprises, market factors should be fully considered in the process of talent training, the degree of cooperation with enterprises should be deepened, and colleges and enterprises should jointly build industrial colleges. Both schools and enterprises carry out in-depth cooperation in talent training program construction, curriculum construction, textbook construction, laboratory construction, practice base construction and other aspects, integrate industrial needs into the teaching process, bring the actual production to the school, and put students' practice on the production site. Apply the practical teaching reform to production practice, deeply integrate schools and enterprises, and jointly cultivate applied talents.

3.4 Building a Team of High-Quality Practical Teaching Teachers

The main body of practical teaching is students, but the key link is whether the ability and level of practical teaching instructors can meet the requirements of applied talent training. This requires colleges and universities to strengthen the cultivation of double qualified teachers, make great efforts in system construction and use the system to promote teachers' development. First, it is necessary to form a system of on-the-job training for practical teaching instructors in enterprises, organize teachers to on-the-job training in industrial enterprises in winter and summer vacation, or organize backbone teachers to carry out on-the-job training for a long time. The second is to form a dual qualified teacher recognition system. For teachers who pass the examination and are recognized as dual qualified teachers, they will be given extra points in terms of salary, professional title evaluation and priority evaluation. Third, we should invite experts from relevant fields of enterprises and institutions to the school to carry out seminars, lectures or undertake teaching tasks, so as to bring the actual production into the students. Fourth, we should improve the assessment, incentive and the exit mechanism for practical teaching instructors, and promote teachers to study practical teaching and improve teaching quality through process management.

3.5 Strengthening the Construction of Practice Bases inside and Outside the School

We should build a number of practical teaching bases inside and outside the school that can meet the training of applied talents. The construction of practical teaching base is related to whether the training of applied talents can be connected with the needs of industry enterprises, and to the exercise and improvement of students' practical application ability.

3.6 Keep pace with the Times and Update the Practical Teaching Content in Time

With the information technology revolution, the development of new industries, new formats and new technologies of the Internet plus industry, and the 2025 changes in industry 4 and China made, the speed of updating of industry enterprises has accelerated further, and the market demand has

been changing constantly, which has put forward higher requirements for personnel training. Colleges and universities should also adapt to this change for the renewal of practical teaching content. First, we should deepen the updating of basic experimental contents, appropriately reduce demonstration and verification experimental projects, and increase the construction of comprehensive, design and innovative experimental projects. The second is to form a step-by-step practical teaching training path, sort out the whole process of practical teaching, avoid repetitive experiments, and clarify the connection degree of practical teaching courses. Third, we should strengthen the introduction of new technologies into industrial enterprises and exercise students' application ability through various ways.

3.7 Strengthen Process Management and Improve Teaching Quality

Builds a practical teaching system and standardize the operation of all links of practical teaching through the system. Build a stable practical teaching management team, standardize the management of practical teaching process, implement practical teaching tasks and plans, and do a good job in practical teaching summary and the continuous improvement.

4. Construction of practical teaching evaluation system

4.1 Improves the Quality Control of Practical Teaching

Build a practical teaching quality evaluation system to improve the quality of practical teaching through inspection, assessment, reward and punishment. With the help of the supervision team of schools and colleges, do a good job in the quality evaluation of practical teaching, promote reform with evaluation, and constantly improve the quality of practical teaching. First, we should do a good job in the inspection of the practical teaching process, organize the competent departments to conduct spot checks, organize supervisors to listen to the practical teaching courses, and give feedback on problems. Second, we should do a good job in the evaluation of practical teaching courses by school leaders, supervisors, peers and students, select the advanced through inspection and evaluation, and enhance teachers' sense of honor. Third, do a good job in the practical teaching management platform and improve the informatization of practical teaching process management through network management.

4.2 Improve Practical Teaching Evaluation

The construction of practical teaching evaluation mechanism mainly investigates students' experimental and practical ability, engineering design ability, professional practice ability, scientific research and innovation and entrepreneurship ability. Through the practical teaching evaluation, verify the students' ability training level, and provide support for further improving the quality of practical teaching.

5. conclusion

Practical teaching is an important part of the cultivation of applied talents. It is very important to build a practical teaching system in line with the cultivation of applied talents. To build a practical teaching system, first of all, we should continue to promote the integration of school enterprise cooperation, industry and education. Combined with the market demand, we should improve

students' market adaptability through practical teaching. At the same time, we should do a good job in the practical teaching system and improve the quality of practical teaching from talent training scheme, curriculum, teaching materials, process management and quality evaluation.

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