Exploration of the Training Mode of Compound Talents in Computer Science and Technology in Local Universities under the Background of New Engineering

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Abstract: Under the background of new engineering, the computer science and technology majors in local universities are facing profound changes. This paper deeply explores the importance of building a multi-disciplinary interdisciplinary education mode in the field of computer science and the mode and strategy of cultivating compound talents in computer science and technology majors.

Key words: New Engineering Background; Local Universities; Computer Science and Technology

In the current environment, cultivating talents in the field of computer science and technology that can adapt to the development of The Times is an important topic to be discussed urgently. This paper aims to explore the training methods for the field of computer science and technology in local universities, and also provide specific suggestions for the core challenges.

1.The Importance of Cultivating

compound talents in local colleges and universities As an indispensable part of China's higher education structure, local colleges and universities play an important role in promoting local economic development and sustainable social progress.

With the increasing implementation of national innovation-driven strategies, local universities are facing rare development opportunities. Especially in the new engineering environment, local colleges and universities shoulder the core responsibility of cultivating talents who can contribute high-quality and innovative spirit to regional economic growth. In recent years, with the active implementation of the "Belt and Road" strategy and the western development strategy, all regions in China are strengthening the recruitment and training of innovative technical personnel to adapt to the greater development and demand. Different from universities across the country, local universities can better meet the real requirements of local industries in the talent training program, thus showing their unique advantages and missions in cultivating multiple skilled and versatile people. Local universities can directly respond to the growth needs of regional economy. At the same time, it can also promote the construction and improvement of the regional innovation system, so as to improve the overall competitiveness of the region. With the stable transformation and improvement of the regional economy, the urgent need for human resources with high quality and multiple skills is also gradually increasing. In view of the significant differences in the economic development level of different regions in China and the obvious differences in talent demand in different regions, local universities need to carry out profound transformation of teaching mode to strengthen the improvement and construction of application-oriented talent training mode [1].

2.Exploration of the Training Mode of Compound Talents in Local Universities Under the Background of New Engineering

2.1 Optimize the Curriculum System and Promote the Interdisciplinary Integration

1. Reform of the course content under the new engineering background Driven by new engineering concepts, traditional teaching methods no longer meet the diverse needs of modern industries for versatile professionals. Therefore, in order to cultivate applied talents with both comprehensive quality and innovative spirit, it is necessary to strengthen the improvement of curriculum structure. Colleges and universities in all regions should

be closely linked with the progress of new engineering technology, and comprehensively optimize and adjust the current curriculum. Regional colleges and universities should integrate more professional skills and knowledge into interdisciplinary fields when formulating courses. In addition, educators should also emphasize the cultivation of students' comprehensive skills and innovative thinking in the process of education, so as to ensure that they have the in-depth understanding and practical ability to solve various complex engineering problems. The course content should be closely related to the actual needs of industrial development and the latest developments in technology. For example, when we design courses related to artificial intelligence, the teaching of cutting-edge technologies such as deep learning, natural language processing and computer vision is a fusion factor that can be considered. In addition, teachers can also integrate the actual needs of enterprises into the teaching, which helps students to more deeply realize the importance of combining theory and practice. In addition, the curriculum design should emphasize the transfer of knowledge and training ability at the same time, and the corresponding curriculum structure should be designed according to the uniqueness of different majors, so as to ensure that it not only meets the goal of talent training, but also is highly targeted and practical. Local colleges and universities should also increase the attention to the international education, especially in the field of computer science and technology, into the international standards, the forefront of academic views and global case analysis, this can make students a more comprehensive understanding of the development of global technology and industry dynamics, so as to enhance their international vision and competitiveness.

2.Interdisciplinary curriculum design and implementation Designing courses covering different fields is the key to developing versatile professionals. During teaching, students can complete one or more projects through teamwork in order to better plan and optimize the course content. In order to carry out the curriculum design of various disciplines more effectively, it is necessary to construct a reasonable and efficient curriculum structure system. This way of cooperation not only eliminates interdisciplinary barriers, but also helps to stimulate innovative ways of thinking between teachers and students. These schools may also strive to introduce educational talents from other disciplines in order to involve them in the curriculum [2].

2.2 Strengthen Practical Teaching and Enhance Students' Comprehensive Practical Ability

1. Construction of practical teaching bases inside and outside the school The actual education base in the school can provide many applied talents in the society, benefiting both schools and enterprises. In the process of building a practical teaching base outside the school, local universities should cooperate closely with enterprises, scientific research institutions and relevant official departments, and the goal is to jointly build a practical practical teaching center. In addition, schools can use the professional practical operation platform to carry out cooperative innovation between schools and enterprises, so as to improve the quality of talent training. For example, consider setting up an "AI application laboratory" with technology companies, or working with the manufacturing industry to create a "cooperation base for production, learning and research of intelligent manufacturing". Both schools and enterprises can choose the most suitable model for cooperation based on their unique attributes. Through these established partnerships, students are able to get directly involved in the development plans or day-to-day operations of the enterprise, with many valuable experiences. In addition, schools and businesses can upload their research results to the public in a timely manner, which will help them insight into the latest developments in the industry. In addition, enterprises also have the opportunity to select outstanding talents from this group, in order to make both sides benefit from it.

2. Organic combination of practical teaching and theoretical teaching Integrating practical education and theoretical education has a decisive influence on cultivating students' multifaceted practical ability. At present, the goal of local educational institutions in China are not clear, and the quality of practical teaching needs to be further improved. Regional higher education institutions should innovate their teaching skills to ensure the perfect combination of practical application

and theoretical knowledge. We should adopt the teaching strategy of "theoretical learning first, and then verification through practical experience", so that students can have the ability to participate in relevant activities immediately when they master theoretical knowledge. In the guidance of the MIS course, representative cases from the development stage of the system can be used to organize and implement classroom teaching activities."Software engineering" as an example, in this professional course, educators have the ability to build a comprehensive software development system, the purpose is to let the students in the demand identification, construction, coding, and testing and implementation of various steps, fully involved in the project design of each link, and through the practical application to master the whole software development process. In order to encourage students to show their inquiry ability, educators need to actively explore and develop various teaching examples, so as to stimulate students' enthusiasm for learning [3].

2.3 Promote the Combination of Industry, University and Research Institutes and Promote Collaborative Education

1. Mechanism construction of deep cooperation with enterprises According to its own specific market needs, the company participates in the planning process of higher education courses to ensure that the course content can adapt to the specific requirements of the industry. In addition, the school can also use the cooperation between schools and enterprises to establish laboratories or training bases to provide necessary support and guarantee for the school to perform relevant experiments and practice tasks. At the same time, enterprises provide specific project examples as practical aspects of the course, so as to help students to have a deeper understanding of the actual needs and skills of the enterprise

epilogue To sum up, in the new engineering environment, local universities should not only pay attention to the integrity of the curriculum structure and strengthen the practical teaching when studying the compound talent training strategy, but also promote the production, learning and research close cooperation, but also pay attention to the cultivation of students' innovative ability and comprehensive literacy.

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