

Research on the training of computer talents in private colleges

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Abstract: There are some problems in the training of computer talents in private colleges, such as the disconnection between cutting-edge theory and cutting-edge application, the lack of teachers' engineering experience, and the single teaching method, which can not meet the requirements of the training of new engineering talents. In order to solve the current problems, this paper studies the training direction of computer talents in private colleges under the background of new engineering, and builds an education and teaching system suitable for the training of computer talents under the background of new engineering, so as to provide guarantee for the training of high-quality computer talents who meet the needs of the development of new technology and have market competitiveness.

Key words: private colleges and universities; Computer; Personnel training

I. Problems in the training of computer talents in private colleges and universities

Since the construction of the new engineering, all colleges and universities in China have explored new engineering teaching systems and actively carried out education and teaching reforms. The training of computer talents has been continuously reformed and innovated in the aspects of curriculum system, teaching methods and evaluation mechanism, and effectively improved the quality of talent training. However, there is still a big gap with the development needs of emerging industries and the professional certification of standard engineering education. The following problems still exist in the training of computer talents: ① the training of computer talents can not meet the market demand; ② The curriculum theory system can not meet the requirements of new engineering; ③ the effect of students' comprehensive development ability, innovation ability, market competitiveness and teamwork ability is not good; ④ students' sensitivity to cutting-edge technology and cutting-edge theory of the subject is not strong, and attention is not enough; The construction of teacher team lags behind, and the engineering experience is insufficient; The integration of production and education, collaborative education cooperation is not comprehensive, docking is not close. The above results in a large market demand for computer professionals, and the graduates are difficult to meet the needs of society.

Under the new engineering background of higher education changing from high-speed development to high-quality development, the task of private colleges and universities is more difficult and the road to development is full of difficulties. First of all, compared with public colleges and universities, private colleges and universities have a relatively weak student base. Secondly, private colleges and universities have limited financial support from non-state financial funds. Finally, the teachers of private colleges and universities are relatively weak, while the teachers of public colleges and universities are strong, and there are great differences in teachers. The large turnover of teachers in private colleges and universities is unfavorable to the long-term development of private colleges. Compared with public institutions, private colleges are in a disadvantageous position in terms of educational forms, student resources, teachers and tuition fees. Under the current background of new engineering, the only way to promote the sustainable development of private colleges and universities is to make positive changes in the training of computer talents, further improve the quality and effect of running schools, connect the philosophy and direction of running schools with the regional social and economic development, and cultivate high-quality interdisciplinary talents with innovation and entrepreneurship ability, who can adapt to the industry development and lead the future.

II. Strategies for cultivating computer talents in private colleges and universities

Aiming at the problems existing in the training of traditional talents, the School of Computer and Computer Science of Pujiang College of Nanjing University of Technology deeply studies the training strategies of computer talents under the background of new engineering, thinking and exploring the computer talents facing the future core competitiveness. Through long-term research and practice, relying on school-enterprise cooperation, based on the results-oriented education concept and engineering education professional certification standards, it constructs a teaching framework system suitable for computer and computer education under the background of new engineering, carries out in-depth reform and practice in the aspects of talent training objectives, training modes, curriculum systems, teaching methods and teaching staff, and explores the methods and strategies for educating talents under new engineering.

1. Establish the training objectives of computer talents

The talents cultivated by computer majors should have good humanities, science and professional qualities, have a solid foundation, quickly adapt to the needs of industry technology development, and have good computer application and innovation ability. Pay attention to the industry trends, understand the frontier technologies in the computer field, and have the courage to try new technologies and new methods. Establish a lifelong learning philosophy and have cross-cultural communication skills in order to cooperate on a global scale.

2. Establish a training model for computer talents

To establish a training model for computer talents, focusing on the fundamental task of "who to train, how to train and for whom to train", cultivate applied and innovative engineering and technical talents with a high sense of social responsibility, solid professional quality and sustainable development. With the training of "applied and innovative" talents as the center, it pays attention to the combination of general education and professional education, theoretical education and practical education, professional foundation and professional core,

frontier theory and frontier application, and expands comprehensively in the height, width, length and breadth of education. To promote the integration of production and education, science and education, and teachers. Enterprises are deeply involved in personnel training, and multi-dimensional cooperation on innovation and entrepreneurship, teachers, and teaching resources has been established in the integration of schools and enterprises. Taking discipline competitions as breakthroughs, new ideas and methods will be extracted from them to improve students' ability to learn independently and explore the unknown, and promote scientific and technological innovation.

3. Construction of computer curriculum system

Develop a curriculum system that conforms to students' comprehensive development, train students to master the basic theories and basic skills in the computer field, and pay attention to the study of professional core courses such as software system development, Web development and system architecture, and cultivate students' professional ability. Through various kinds of practical activities such as curriculum, practical training and production practice and other multi-level cultivation of students' engineering practical ability. Students practice their ability of development, cooperation, communication and project management in engineering projects, which lays a solid foundation for students to find jobs through multiple channels. According to the development needs of disciplines, courses on artificial intelligence, big data and cloud computing are offered, and elective courses such as the Internet of Things and intelligent transportation are added. The latest achievements of disciplines are updated and integrated into the curriculum system of students to meet their different needs.

III. Specific measures for cultivating computer talents

1. Reform the traditional teaching methods

Under the background of new engineering, to train excellent front-line engineers with the requirements of The Times and social development as the goal, practical teaching must be strengthened. The teaching process is guided by cases, arouses students' interest, takes project development as the main line, and runs through the whole process of course teaching. In the learning process, students participate in real projects and guide their learning from "I want to learn" to "I want to learn", so that students' knowledge, ability and quality can develop in harmony and highlight vocational requirements.

2. Promoting learning through competition

The competition should run through the whole process of student training, and the practical ability should be continuously improved from the competition. Through the course competition to consolidate students' basic knowledge modules, to promote the integration of course learning. Skill competition and vocational competition involve students' comprehensive software development ability, improve students' ability to analyze and solve problems through competition, and improve students' vocational skills. Through the competition, it provides a greater learning and communication platform for teachers and students to quickly discover their own strengths and weaknesses, stimulate active exploration, positive thinking, and enhance students' awareness of innovation and competition. The organic combination of teaching in competition, learning in competition and learning in competition promotes the learning atmosphere and curriculum construction, stimulates students' drive and creates a strong professional learning environment.

3. Practice the industry certification system

For employers, having a certain number and quality of vocational skills certification means that the recruited employees have a certain level of professional literacy and skills, which is conducive to improving the overall competitiveness of the enterprise. In order to obtain the vocational skills certification, students need to continuously improve their professional skills in the learning process, participate in various skills training and practical activities, and accumulate practical work experience. In addition, students also need to pay attention to industry trends and understand relevant policies and standards for vocational skills certification in order to better plan their career development path. Guide and encourage students to participate in the "1+X" course certification, such as computer engineer, system analyst, system architect, industry certification includes Huawei, Ali, Tencent and Baidu big data and artificial intelligence engineers (junior, middle and senior), Big data Analyst and artificial intelligence professional skill level certificates from the Ministry of Industry and the Chinese Society for Artificial Intelligence, Microsoft Certified Engineer, Oracle Certified Engineer, etc.

4. Building digital resources and adopting diversified teaching methods

As an important supplement to offline teaching, online teaching enables students to complete the summary, examination and reflection of courses online, which helps students preview the knowledge points before class and review them after class, consolidate and improve knowledge, and ensure the quality of classroom teaching. The construction of digital teaching resources is integrated with curriculum teaching reform, and courses are carried out through online learning, national higher education smart education platform, e-cloud classroom, Tencent classroom, and online school. Organize teachers to participate in college, provincial and national micro-course and micro-course competitions. Through micro-lessons, the teaching key points and difficulties in classroom teaching can be presented in a short time. The process of making micro-lessons is also a process for teachers to carefully design, constantly expand knowledge, improve teaching skills, teaching level and teaching effect.

5. The establishment of a complete talent security and effect evaluation system

Enterprises participate in the establishment of evaluation, feedback, analysis, continuous improvement of the concept of talent training. Schools, teachers, students' self-assessment, cooperative enterprises and employers will evaluate and feedback students' comprehensive knowledge, technical ability and practical innovation. Teachers evaluate students' performance in class, homework completion, teamwork and other aspects, while providing personalized feedback to help students improve. Students' evaluation self-reflection on their own learning process and outcomes helps students understand their strengths and areas for improvement. Partner companies and employers provide

feedback and evaluation on students' technical abilities, teamwork and problem-solving skills through internships and project cooperation. Diversified evaluation and feedback mechanisms not only help students comprehensively improve their abilities and qualities and prepare for their future studies and careers, but also help schools cultivate talents who better meet the needs of society.

IV. Summary

In order to meet the requirements of computer talents training under the new engineering background, in-depth research and practice are carried out from the aspects of talent training objectives, curriculum system, teaching methods, teacher team construction, industry-university-research cooperation, etc. The existing curriculum system should be adjusted and optimized, emphasis should be placed on general education, practice teaching should be strengthened, and advanced theories and technologies should be introduced. Students should be encouraged to participate in scientific research projects, innovation competitions and other activities to improve their competitiveness and ability to innovate and start businesses. A quality evaluation system for cultivating new engineering talents should be established to comprehensively evaluate and give feedback on students' academic performance, practical results and innovation ability. To provide guarantee for training high-quality engineering talents who meet the requirements of the development of new technologies and have market competitiveness.

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