The Construction of the Cultivation Mode of the Applied Talents Based on the Cooperative Education of Production, Teaching and Research

YONGSHENG HU

ABSTRACT

With the development of science and technology and the development of society, the requirements of talented people in China are getting higher and higher, and the skilled talents who have learned their expertise in first-line production are more and more affected by the enterprise. The cooperative education of industry, academia and research, that is, industry and school and research institutions to develop and play together, for the cultivation of applied talents have a positive effect. In this paper, the application of communication engineering application talents as an example, describes how to apply the cooperative education model of production and research to cultivate applied talents, and the cooperative education of production and research in the cultivation of applied talents encountered problems.

KEYWORDS

Communication engineering, production and research, cooperative education.

INTRODUCTION

Technology development today, the pace of life also will be accelerated. However, the employment market in China is often difficult to find the right job graduates; enterprises are also looking for talent to spend valuable time and effort. For example, with the modern technology convergence of the communications business, the demand for professionals is very urgent. Communication is the communications business in the industry based on the fundamental, is the embodiment of corporate competitiveness. However, now most colleges and universities to open the communications engineering, the cultivation of students' professional knowledge to meet the requirements of enterprises, but in the professional capacity is obviously insufficient. In the field of communication engineering personnel training, cooperation education in the development of student knowledge and improve students' professional ability can achieve good results.
CONSTRUCTION OF TALENT CULTIVATION MODEL OF COMMUNICATION ENGINEERING BASED ON COOPERATIVE EDUCATION OF PRODUCTION, TEACHING AND RESEARCH

Schools and enterprises to strengthen cooperation for the enterprise orientation training personnel

Schools and enterprises to strengthen cooperation, which can effectively solve the graduates cannot find a suitable position, companies cannot recruit the right people. As early as the 20th century, 20 years, the enterprise practice workshop to form the prototype of the current school-enterprise cooperation. After nearly a hundred years of development, now is quite mature. School and business cooperation can be divided into four modes: the introduction of enterprises in schools, engineering and learning, school-enterprise interaction and "order" type of cooperation.

School introduction of business model, refers to the enterprise part of their own production line construction in the school, students in the study of relevant knowledge, can be combined with theoretical knowledge and practice, which solve the students at work to find a difficult problem, Alleviate the plight of the lack of business, to the school, students and business win-win situation.

Alternating engineering and engineering, that is, labor and teaching alternately model. The school can be selected according to the actual situation of two ways of learning, one is divided into two groups of students, take turns to learn and practice, to semester or semester for the period; the other is full-time students in the enterprise training, Spare time to study the theoretical knowledge. This will be able to combine theoretical knowledge with practice, both to improve the interest of students learning, but also improve the professional ability.

School-enterprise interaction, that is, enterprises to provide students with internships and related equipment, raw materials, enterprises and schools to develop teaching plans, the school business professionals to the theoretical knowledge of the training. This enables enterprises and schools to form a good interaction, the excellent management of enterprises and technical staff to teach students the practical application of knowledge, and school teachers can also be on the staff of the theoretical knowledge of the training to make up for the lack of professional knowledge of employees.

"Order" cooperation, that is, enterprises and schools, enterprises need what kind of talent, the school orientation training, students have been clear after the school work content, in graduation can immediately go to the relevant unit employment. Enterprises need only after the students graduate for short-term training, students can apply for employment. This allows the school to develop a strong adaptability of students, while students after graduation employment stability are high.

Schools to carry out innovative education, build the appropriate communication engineering network training platform

The development of society has promoted the entry of science and technology into all walks of life, including the education industry. Teachers in the teaching can use the appropriate technical means to enhance the teaching effect, which can strengthen the students understanding and memory of knowledge. For communication engineering
students, to build communication engineering network training platform is an innovative way of learning, but also a practice with the combination of learning. The construction of the network training platform, so that students understand the knowledge becomes simple, but also to teachers and production and teaching education teaching methods effectively combine to improve the students' practical ability and professional and technical level.

**Strengthen the practical teaching of the course**

To cultivate practical talents, we need to highlight practical teaching in teaching, improve the proportion of practical courses, appropriate to reduce the theoretical course of teaching time. In order to ensure that students have sufficient knowledge of the premise, so that students have more time to improve their professional ability. In the practical teaching of the curriculum need to pay attention to the preparation of experimental equipment to be sufficient, the laboratory should be fully open to students, to encourage students to practice.

**The reform of the examination mode**

Now the school's assessment of students is still the main way to test papers, which forced students to learn the process of learning the importance of theoretical knowledge is higher than the practical ability to a certain extent, hindered the improvement of professional and technical ability of students. The school can be based on the actual situation of the examination of the appropriate reform of the way for the theoretical knowledge of students to understand the memory, the need for practical operation of the course, assessment methods can be changed from the test model to experimental mode, to enable students to play their own professional advantages, the use of professional knowledge To carry out experimental research, which can not only consolidate the theoretical knowledge of students, but also enhance the ability of students to solve practical problems.

**The school conducts employment-related employment courses to provide guidance for student employment**

Although the communications industry has been developed for decades is still emerging industries, most of the employment still needs to start from the frontline staff. In the training of communication engineering talents, the school needs to focus on the basic quality of students to cultivate, including the cultivation of professional knowledge and ability and the ability to adapt to the corresponding post. The model is constructed as shown in Figure 1.
PROBLEMS IN THE CONSTRUCTION OF PRACTICAL TALENTS TRAINING MODEL BASED ON COOPERATIVE EDUCATION OF PRODUCTION, TEACHING AND RESEARCH

Still exist in the traditional concept of personnel training to make a serious waste of talent

In the traditional education of our country, the cultivation idea of elite education still affects modern teaching. The application of talent in the acceptance of advanced theoretical knowledge after the transfer, it is difficult to accept the same degree of practical ability to cultivate, which with the business position has a more serious derailment phenomenon, so that the right people cannot get appropriate education, talent waste serious.

Production and research cooperation education is still in the development stage, the operation mechanism needs to be improved

China's colleges and universities to introduce the teaching model of production and research is still in the development stage, the operation mechanism is not perfect, schools and enterprises is difficult to form long-term stable cooperation. Specific performance for the school to set up more projects, the actual cooperation projects less; school-enterprise cooperation projects, less investment and so on.
Talent training mode and personnel training focus needs reform

Colleges and universities in the cultivation of talent said the lack of innovative ideas to develop, resulting in students into the job can not actively study, cannot be innovative technology. Whether it is front-line staff or senior management, is generally lack of awareness of innovation. At the same time, due to the traditional way of education, most colleges and universities focus on teaching is still theoretical knowledge, students hands-on practical ability is still insufficient.

Teachers' teaching methods are too conservative

Most of today's colleges and universities have been using the traditional teaching model, cannot be knowledge and society in the practical application of people linked. Teachers are often more concerned about the assessment of their titles and personal interests related to scientific research, not all the energy on the cultivation of students, which to some extent affected the ability of students to enhance.

COOPERATIVE EDUCATION OF PRODUCTION, TEACHING AND RESEARCH AND TRAINING OF APPLIED TALENTS

School updates educational philosophy

The traditional educational philosophy, the elite education model enjoys popular support; it is difficult to meet the needs of enterprises on the talent. Schools in the process of education for student; should abandon the concept of elite education, fully tap the potential of students, individualized, so that each student can be good at their profession to play their own advantages.

School reform disciplines set up, the introduction of characteristics of professional teaching

According to their own characteristics and education based on the school, the discipline can be a major focus on training, the introduction of specialties. Strengthen the basic education, strengthen the foundation, focus on cultivating students' professional ability, and cultivate professional talents who meet the needs of enterprises.

The government has increased the support for the cooperation education of industry, academia and research

Cooperative education of production, teaching and research requires government support. The government can formulate relevant laws and regulations to ensure the smooth progress of the cooperation of production, teaching and research; to provide schools and enterprises with relevant information services so that schools and enterprises can grasp the relevant developments; government funding will provide financial support for cooperative education The establishment of the relevant tax relief to a certain extent, promote the smooth development of production and research cooperation education.
Strengthen the construction of teachers, innovative teaching methods

Strengthen the construction of teachers; improve the quality of teachers, to promote the dedication of teachers. The school is dedicated to teachers with professionalism, and teachers are trained in teachers' morality, so that teachers will be separated from the title and salary increase, focusing on innovative teaching methods and strengthening students' ability.

To communication engineering professional, for example, the school personnel training program as shown in Table 1.

| TABLE 1. CORRESPONDENCE TABLE OF COMMUNICATION ENGINEERING COURSE. |
|-----------------|-----------------|-----------------|-----------------|
| **Course category** | Hours of study | Percentage of total% | Credits | Percentage of total% |
| Required courses | theory | 512 | 19.63 | 30.5 | 17.43 |
| | Experimental training or others | 336 | 12.88 | 12 | 6.86 |
| Elective Courses | theory | 160 | 6.13 | 10 | 5.17 |
| Foundation Course | Experimental training or others | 104 | 3.99 | 3.25 | 1.86 |
| Required courses | theory | 384 | 14.72 | 24 | 13.71 |
| | Experimental training or others | 104 | 3.99 | 3.25 | 1.86 |
| Elective Courses | Limited course | theory | 96 | 3.68 | 6 | 3.43 |
| | Experimental training or others | 32 | 1.23 | 1 | 0.57 |
| | Optional course | theory | 112 | 4.29 | 6 | 3.43 |
| | Experimental training or others | 48 | 1.84 | 1.5 | 0.86 |
| Innovation and entrepreneurship courses | theory | 32 | 1.23 | 2 | 1.14 |
| | Experimental training or others | 48 | 1.84 | 3 | 1.71 |
| Innovation and entrepreneurship time and quality courses | | | 6 | 3.43 |
| Main practice teaching links | | | 26.5 | 15.14 |
| Total | Theoretical total | 1936 | 74.23 | 119.5 | 67.71 |
| | Time total | 672 | 25.77 | 55.5 | 32.29 |
| | Total | 2608 | 100.00 | 175 | 100.00 |

CONCLUSION

Based on the cooperative education of industry, academia and research, the applied talents have a solid professional knowledge, and have practical ability and meet the needs of modern enterprises. Schools should work with enterprises to develop appropriate professional and technical application talents, at the same time, the government should also give the necessary support. Schools, enterprises and government to work together in order to cultivate the application of talent has a positive role in promoting the contribution of China's economic construction.
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