

Exploration and Practice of College-Enterprise Cooperation Training Applied Talents Model——Case Study of Applied electronic technology Major of the City Vocational College of Jiangsu

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Abstract Training applied talents model on college-enterprise cooperation —“post-oriented, integrating theory with practice” had put forward. In the following several aspects to cooperating: formulating the talent training target, curriculum development, teacher training, topic of research and development, training base construction. It actively explores and practises training applied talent in higher vocational education, and the model is innovative. Practice shows that college-enterprise cooperation based on “post-oriented, forming college-enterprise win-win situation in cooperation in running colleges, cooperative education, cooperative employment, cooperative development.

1. Construct training applied talents model of college-enterprise cooperation: post-oriented, integrating theory with practice

1.1 training applied talents model

Applied electronic technology major of the city vocational college of Jiangsu follows the guiding principle for running a college about “serve Jiangsu, serve electronic information industry, radiate changjiang delta”, actively carries out cooperation between higher vocation college and enterprise; Through extensive research and demonstration, it made clear the direction of major development and target orientation; On this basis, it formulated the major construction plan and major construction programme; According to the industrial structure adjustment and product upgrade to bring the change of applied talent demand, it timely revising the applied talent training plan.

Based on the above, it put forward “training applied talents model of college-enterprise cooperation: post-oriented, integrating theory with practice” which has the characteristics of the city vocational college of Jiangsu

1) Post-oriented[1]

The so-called "post-oriented", namely, in order to determine occupation post demand, study organization of leading major teaching contents; In order to realize major training objectives, make sure implement of leading major teaching content; To use assessment standard of occupation post completes performance evaluation of leading major teaching content.

2) Integrating theory with practice

"integrating theory with practice", namely, a teaching mode of the integration of theory and practice, is to combine theory course with practice course to carry out teaching. It not only make communication and contact of theory and practice, but also stimulate students' learning interest and passion [2].

This teaching model emphasized to give full play to the leading role of teachers. By setting the teaching task and teaching target, make teachers teaching while students learning, doing, thereby to build quality and technical ability training framework, to rich classroom teaching and practice teaching, to improve teaching quality. In the whole teaching process, theory and practice courses are alternate. Its purpose is to highlight cultivation of the practical ability and professional skills of students, and fully mobilize and stimulate students interest in learning, thus improve teaching efficiency and effect.

1.2 The relationship between post-oriented and integrating theory with practice

“Post-oriented” reflects the post target of "service purposes, employment guidance, ability training"; “Integrating theory with practice” embodies the teaching mode of theory and practice integrating into one.

2. The implementation process of training applied talents of college-enterprise cooperation on “post-oriented, integrating theory with practice”

2.1 The content of training applied talents of college-enterprise cooperation based on “post-oriented, integrating theory with practice”

Through continuous exploration and ceaseless practice during several years, the city vocational college of Jiangsu enriches the contents of training applied talents of college-enterprise cooperation based on “post-oriented, integrating theory with practice” in applied electronic technology major. These mainly includes [4]: targets of training applied talents drafted by college-enterprise cooperation, curriculums of developed by college-enterprise cooperation, teachers trained by college-enterprise cooperation, teaching and teaching reform conducted by college-enterprise cooperation, topics researched and developed by college-enterprise cooperation, practical training bases constructed by college-enterprise cooperation etc.

2.2 The implementation process of training applied talents of college-enterprise cooperation on “post-oriented, integrating theory with practice”

1) Targets of training applied talents drafted by college-enterprise cooperation

In order to meet needs of training applied talents in enterprise, according to two training orientations of "LED technology" and "solar energy technology" in applied electronic technology major, we and some relevant enterprises jointly formulate personnel training target based on post-oriented.

One is we go to related enterprises to investigate the requirement of training applied talents. We investigated some enterprises and industries like Nanjing Lopu limited by share Ltd, Suzhou Siemens electrical company limited etc. Show that they need more than 2000 graduates of applied electronic technology major within the next three years. Main posts have production assembly, drawing, testing, debugging, maintenance, production management and quality management.

Another is the related enterprises come our college to discuss and establish jointly targets of training applied talents. We invited 17 enterprises of Nanjing Lopu limited by share Ltd, Suzhou Siemens electrical company limited etc. to come our college to research and discuss scheme of training applied talents and major construction, in order to further understand current situation of talent needs in enterprises. We focus on two training orientations of "LED technology" and "solar energy technology" in applied electronic technology major, and developed their targets of training applied talents.

2) Curriculums of developed by college-enterprise cooperation

According to two training orientations of "LED technology" and "solar energy technology" in applied electronic technology major, and linking analysis of post tasks, we introduced some required factors on knowledge, skills, quality and so on in major courses, jointly developed major courses with enterprise cooperation.

The course "electronic product drawing" has become the provincial excellent course by jointly developed with Shenzhen em door electronic technology company limited. In addition, the course "LED display control system" by jointly developed with Nanjing Lopu limited by share Ltd, and the course "technology of solar photovoltaic application" by jointly developed with Nanjing kangni technology industry company Limited, Nanjing solar energy research institute company Limited have become the college excellent courses. These courses fully embodies the combination with theory and practice.

3) Teachers trained by college-enterprise cooperation

The teacher team is the most important resource in colleges. It reflects the professional core competitive ability[3].

In recent years, my college increases investment to strengthen teacher team construction in

college-enterprise cooperation. In addition to intensify the introduction of talents to attract outstanding talents at home and abroad, we strengthen young backbone teachers training and to select teachers learning in enterprises.

First, the college selects youth teachers to cooperative enterprise to learn full-time.

Second, by using of lead students to cooperative enterprises to be underway internship opportunities or cold vacation and summer vacation, the college selects major teachers to these enterprises to practice.

Third, the college employ enterprise backbone technical personnel as a part-time teacher to enrich the team of major teachers.

4) Teaching and teaching reform conducted by college-enterprise cooperation

In order to improve the teachers teaching ability, we carry out the teaching reform with enterprises.

We select real products or projects as the carrier for major core courses and practice courses. In the teaching process, we strengthen the skills training. In the teaching method, we put into effect “integrating theory with practice”.

So far, all the major core courses and practice courses are carried out the teaching method of “integration of theory and practice teaching”. It plays an important role in reform of training applied talent.

5) Topics researched and developed by college-enterprise cooperation

In recent years, the teachers of applied electronic technology major cooperate with enterprises all the time. They hosted and participated in 16 longitudinal and transverse topics, and obtained two new practical type patents of invention.

6) Practical training bases constructed by college-enterprise cooperation

We cooperated with enterprises to build the practical training base indoors—provincial demonstrative base “electronics and computer application training center” [5].

The base construction area is 2079 square meters, total equipment sets numbers are 1127, total value 11130000 yuan (RMB), in which value 3510000 yuan equipment is donated by enterprises. The training base meets the needs of the normal teaching, in addition, Spare time opens to the students.

We cooperated with 17 enterprises to build the stable practical training base outside. Our all students carry out practicing in these enterprises.

3. Practice effect

Through exploration and practice of several years, obtained certain result.

3.1 Students and tutors competition awards

In various competitions above the provincial level, the students won nine awards. Among them, three students received the first prize; the tutors won five awards. Among them, three tutors received the first prize.

3.2 The students' employment quality

Initial employment rate of the graduates is over 98%, the employment quality is overall better.

3.3 Satisfaction of enterprises

The survey data shows that the employing units were overall satisfactory for our graduates, and think that they can be competent at present post.

In graduates' ability, the employing units' degree of satisfaction was respectively team cooperation consciousness, 67%; professional knowledge, 61%.

4. Conclusion

Practice shows that the college-enterprise cooperation model of “post-oriented, integrating theory with practice”, effectively improve students operating skills and practical ability, so that our teachers and technical personnel of enterprises realize the information exchange, resource sharing to

enhance the teachers' teaching level and teaching quality, to form win-win situation of college-enterprise cooperation in cooperative education, cooperative employment, cooperative development.

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Reference

- [1] Zhou Li. "Post-oriented" talent training model [EB/OL]. <http://www.dxx.wxcu.edu.cn/ch15/ShowInfo.asp?InfoID=269>, 2011.5.24
- [2] Anonymous. Exploration on the teaching mode of integration of theory and Practice[EB/OL]. http://www.cdlqjy.com/zjw/zjky/201103/20110330092037_21822.html, 2011.3.30
- [3] anonymous. Reflection on how to develop "double type" teachers under college-enterprise cooperation [EB/OL]. <http://www.blog.fhedu.net.cn/user1/fhhcz/2008626175958.html>, 2008.6.22
- [4] The city vocational college of Jiangsu. Analysis report of a pplied electronic technology major[Z]. Nanjing: The city vocational college of Jiangsu. 2011
- [5] Chen Wei, Fan Jun. Research on building training center of mechanical and electronic integration major[J]. Research and exploration in laboratory, 2010 (4): 190-193
- [6] Chen Wei, Fan Jun. Research of curriculum setting and teaching reform with the orientation of employment -- case study of mechanical and electronic integration major of the city vocational college of Jiangsu [J]. Liaoning Higher Vocational Technical Institute journal, 2009 (11): 44-146
- [7] Mycos. Annual report 2010 society demand and developing quality" (2011-05) [EB/OL].<http://cai.jstvu.edu.cn/czyp/showimagenews.aspx?Imgid=167>, 2010.12.26