Study on “3+2” Talent Cultivation Mode of Secondary-higher Vocational Education Link-up on Network Technology Specialties

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Abstract. This paper introduces “3+2” talent cultivation mode of Secondary-Higher Vocational education link-up, taking network technology specialty as an example, this paper introduces the implementation scheme of “3+2” talent cultivation mode from six aspects, including targets of talent-cultivating, curriculum system, teaching content, teaching organization, entrance system, evaluation system.

Introduction

In order to implement the outline of the national medium and long term education reform and development plan (2010-2020) and implementation the Ministry of education national education system reform pilot tasks, speed up the construction to meet the requirements of the economic development mode and the adjustment of industrial structure, which shows the idea of lifelong education of coordinated development of secondary and higher vocational education of Modern vocational education system. To systematic cultivate high skilled talents, most of the country's vocational Colleges carry out the pilot work of “3+2” talent cultivation mode of Secondary-Higher Vocational education link-up (SHVEL).

This paper discusses relevant issues about SHVEL on Network Technology Specialties, relying on the pilot work that implement between Beijing Information Technology College and Beijing economic management school. Through years of teaching and personnel training practice, this paper systematically analyzes the specific problems in the teaching of SHVEL, formed a set of 3+2 talent cultivation integration implementation solution with the link-up of training as the guidance, curriculum system as the framework, teaching content as the core, teaching organization as the promotion, enrollment system as a bridge and the evaluation system as the guarantee.

The Link-up of Talent-cultivating Target as the Guidance

The Secondary Vocational School, the Higher Vocational College and enterprises technical experts are work together to develop a talent Cultivating Mode for SHVEL. Three parties explore the needs of professional talents, enterprise employment and the professional abilities in secondary and higher vocational stages.

Targets of talent-cultivating in Secondary Vocational stage

Firstly, be able to manage the content of the site and the overall planning, clear the overall image of the site, design and produce of Web site art drawings and animation; have good teamwork ability, communication skills, intellectual property rights awareness.

Secondly, be familiar with the site test tool can analyze and process the test data, to update the site and maintenance, have ability to write test report and website maintenance; to cooperate with the team to finish the test and maintenance work, work carefully and seriously, reflects a strong sense of responsibility.
Targets of Talent-cultivating in Higher Vocational Stage

Firstly, be familiar with the code and database, to design website development program, program code, and have the ability to write website instructions. With the user centered working attitude and careful work attitude, team work spirit and copyright awareness.

Secondly, be familiar with network equipment and network architecture, planning and implementation to the local area network, with the planning sub network, routing, flow capacity management. Awareness of environment, safety and energy saving. Able to work hard, have a practical, rigorous style of work

Thirdly, be familiar with windows and Linux to build the network service platform, to design network service architecture solutions for different occasions, with network server planning and erection and maintenance of security network skills. Have strong sense of responsibility and patience, can learn new knowledge independently, have certain organization ability.

SHVEL has brought vocational skills training into syllabus. Colleges complete vocational training in segmentation. In Secondary vocational school students should reach Level Four of Computer Network Administrator (intermediate), and in Higher vocational school students should reach Level Three of Computer Network Administrator (senior). Through the determination of personnel training objectives, to guide the link-up of curriculum system, teaching content, teaching organization etc. aspects in secondary vocational schools and higher vocational colleges.

In the implementation of the platform, combined with vocational colleges training condition and teacher resources, to web design, web site testing as the main line, which has the advantages of curriculum and training; combined with the advantages of higher vocational colleges, mainly with website development and enterprise network to build relevant courses content of the main line, to deepen the network management ability.

The Link-up of Curriculum System as the Framework

The construction of knowledge system and curriculum system is the important part in the program of cultivating talents. The link-up of curriculum system is the framework and the foothold of SHVEL.

The “Class” characteristics of vocational education determine that the curriculum system of vocational education must be built on the basis of occupational Status capacity, rather than a simple "intermediate, intermediate theoretical knowledge + advanced theoretical knowledge," a simple framework. The basic framework should be “secondary vocational emphasized the skill training, high vocational emphasized technical, secondary vocational emphasized occupation, high vocational emphasized specialty, secondary vocational emphasized "Learning by Doing", high vocational emphasized "doing by learning" ".

Therefore, in the stage of secondary vocational education, the curriculum system is mainly based on the relevant skills of web design. However, in the stage of higher vocational education emphasized on theory and application. The Curriculum system is more focused on the expansion and development of the specialty.

The Link-up of Teaching Content as the Core

Teaching content should be distinguished and link-up based on the framework of the curriculum system in the curriculum of vocational colleges. The cohesion of the teaching content can be divided into the cohesion of professional courses, the convergence of public courses and the convergence of certificates.

The Link-up of Professional Courses

The website design course group. Secondary vocational stage: From the website planning and design, Front-end Design, background development, Web site testing, through many web design courses to help students understand the small and medium enterprise website design process. Through the website design process, students learn the relevant technologies and can complete the
small and medium enterprise website construction and management, website maintenance of typical tasks.

Higher vocational stage: Through “Development and Deployment of Park Office website” course, comprehensive application of various technical points in Secondary Vocational Schools. Through the development and deployment of a large park office website, it will enhance student website design and deployment abilities, to lay a solid foundation for the following graduation design and employment.

**Network building course group.** Secondary vocational stage: The course covers the basic work of the management of small LAN. Students will understand the basic knowledge of the network and have abilities to system management and network service solution for deploying small enterprise LAN.

Higher vocational stage: The course covers three aspects of LAN, WAN and Data Center. Students’ abilities have been increased in network equipment debugging and medium-sized enterprise network planning and deployment.

**The Link-up of Public Courses**

Public courses include political, English, mathematics, quality courses. In the secondary vocational school will complete the basic knowledge of English and all mathematics courses. In higher vocational education, the students' ability to communicate in the workplace and the application in higher vocational courses are emphasized.

**The Link-up of Certification**

Secondary vocational stage: Students need to master the basic capabilities of small network building and integrated wiring implementation, and then obtain “network device debugger” (level Four) intermediate certificate. In this stage, students should have abilities of computer basic operation, to obtain "computer certificates (first class)".

Higher vocational stage: Students need to master the ability of network equipment debugging and the ability of large-scale enterprise network planning and deployment, Including WAN building and server building capabilities, and then obtain “network device debugger” (level Three) senior certificate. And the corresponding English certificate should be obtained as well.

**The Link-up of Teaching Organization as the Promotion**

Taking into account the different characteristics of secondary and Higher Vocational College Students in learning basis and talent training objectives, strengthening the teaching process from the aspects of well-directed, systematic, attach Importance to Practical Teaching, Project Teaching and Team learning. Carrying out quality-oriented education in an all-round way, teachers will make good environment for the student development.

**Strengthen Communication and Liaison Teaching Activities**

Both colleges should hold the teaching research activities of the corresponding courses each term. Professional teachers should discuss the core issue of 3+2 SHVEL together, research teaching plan, planning teaching materials and exchange experience. At the beginning of each semester, all teachers involved in the 3+2 teaching are discussed and analyzed students’ characteristics. Selecting the content of the course, using the part that is closer to real life, and design the teaching interaction of high participation.

**Advance into Higher Vocational College for Training**

Organize the students in secondary vocational school to visit the learning environment in Higher Vocational Education. The teachers of higher vocational colleges give regular lectures to students in secondary vocational stage. To reduce offline window, arrange a month-long course before students go to higher vocational colleges.
The Link-up of Enrollment System as the Bridge

The college should take effective courses link-up and reasonable teacher structure as Guarantee condition, Joint effort to establish an integrated vocational and technical college entrance examination mechanism.

After completing 3 years of secondary vocational education, Students can enter the higher vocational education in three ways Examination, Skills Competition and Post Practice. Students who fail to pass the examination could direct employment.

The Link-up of the Evaluation System as the Guarantee

To promote all-round development of students through a full swing through the examination, it is important to establish a complete Student Academic Evaluation System in SHVEL. Students' knowledge learning and skill development are various. It requires that the evaluation should be comprehensive. Teachers should promote diversity evaluation to promote the comprehensive development of students' comprehensive quality.

Through the combination of process evaluation and summative evaluation, each task in each project implementation process is set up with the corresponding task evaluation form, the cumulative assessment of each task directly affects the final course assessment. In both stages, the process evaluation is adopted to train the students' good professional habits.

Summary

SHVEL work carry out from six aspects, including target of talent-cultivating, curriculum system, teaching content, teaching organization, entrance system, evaluation system. SHVEL has effect of localization of talents, optimization of curriculum system, teaching content evolution, diversification of teaching organization, rationalization of higher education system and scientific evaluation mechanism. SHVEL Increases the natural attractive of vocational education and is benefit to set up the perfect modern vocational education system.

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