

Reflection and Practice of Vocational Education in Computer Major Students in Vocational Colleges

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Abstract—Based on the employment status of computer science graduates in vocational employment situation and using the butted perspective of education and market, this article analyzes the reasons of incapability of higher vocational computer science students. Finally, it puts forward that the education of higher vocational computer science students should be butted to the development of the computer industry and creates personnel training model. Therefore, the article discusses the following personnel training model: setting of teaching content, innovation of practical teaching model, and strengthening of emotional quotient education, etc.

Keywords—*computer science; vocational education; post capability*

I. INTRODUCTION

Vocational education means making some kind of occupation or educated labor needed to produce professional quality of education, these qualities are embodied workers a comprehensive understanding of the social and professional with the ability to adapt, which is mainly in vocational interests, career knowledge, vocational and technical, professional competence, ethics and so on. Computer science students to strengthen vocational education effectively improve the overall quality of students and job application ability, suitable talent for the society is the common expectation schools, enterprises and institutions and software companies. In this paper, based on the status of the computer professional vocational education, the foundation seeks to analyze the causes of the current problems of vocational graduates in professional quality on a computer, puts forward effective solutions.

II. THE COMPUTER PROFESSIONAL STATUS OF VOCATIONAL EDUCATION STUDENTS

Currently, under the information age, computer-related industry has been booming, exuberant talent needs, however, to accept the current situation is that many computer and vocational education graduates are often not able to really be recognized by the market, according to the 2013 Chinese university students to the latest employment report showed that more than one computer-related professional initial employment rate continued to

decline in recent years, has become one of the low employment rate of university professionals. In contrast, the labor market there is a huge IT talent gap; enterprises urgently need to recruit on campus talent, but talent truly meet the business requirements of the campus is not much. The reason is poor vocational institutions and corporate butt, one is the quality of the knowledge and ability to understand the respective positions of the enterprise, the skills of students from the actual needs, the lack of application capabilities, on the other hand is the lack of a good part of the graduates attitude, professionalism, ethics and interpersonal skills, such as non- advantage, resulting merchantability wrong way. Therefore, the computer professional vocational education should be capable of German unity, the unity of education and emotional intelligence education; we should pay attention to professional training and improving skills, but also to strengthen vocational concepts, professional ethics, team and other non- mental skills training and education. Currently, in-depth study of the actual needs of the job market, building science training model, employment-oriented professionals to develop computer applications has become a top priority at all levels of personnel vocational colleges.

III. INNOVATIVE COMPUTER PROFESSIONAL VOCATIONAL TRAINING MODEL TO EXPLORE

A. *based on job quality requirements, construct teaching settings*

Teaching and production are closely linked enterprises employing around industry requirements, the need to expand vocational ability teaching job is to improve students' employability and competitiveness of a medicine. Determine the company's job requirements, you can build positions based on job requirements tasks, through job task analysis, summarize, you can get the job quality requirements, thus providing the basis and strategy for the construction of teaching setting and implementation. Our computer professional " network engineer " this post as an example to analyze a common enterprise network engineer jobs, basic to complete four tasks, each task has a corresponding work process, determine job tasks can make we come to "what" questions, such as shown in Table 1.

TABLE I. NETWORK ENGINEER TASKS AND PROCESSES

Network Engineer tasks		tasks process	
Task One	overall planning	I	responsible for the of a network connection inside the room, the system network sharing and network configuration
		II	responsible for the establishment and improvement of the system network topology , good finishing system routing and data analysis
		III	arranged in charge of the engine room and agreements
Task Two	network running and maintenance	I	building of network management system , and the use and implementation
		II	regular optimization of existing networks
		III	maintenance routers, switches and other network equipment
		IV	Stable operation sharing and server security
Task Three	network and system troubleshooting	I	handling client computers and application software failures
		II	Handling all types of computer hardware and software and equipment failure
Task Four	Relevant work on sites	I	release of the company information on the company's website
		II	developing new company website according to the company needs

After determining the tasks and responsibilities of the job, we can analyze that the career of this post should have comprehensive capabilities. The analysis of the computer professional career of capacity is the most important computer teaching a job. Career comprehensive capacity mainly by professional competence, ethics and other elements composition, we needed a network engineer to

analyze the tasks he needed to complete the task of " network security and application platform running and maintenance ", for this work process tasks, we conclude that they should have the professional capacity, which makes us come to " what people do " question, as shown in Table 2.

TABLE II. NETWORK ENGINEERS THE ABILITY TO ANALYZE THE WORK REQUIRED

Network Engineer tasks		Working process		Professional competence of network engineers
Task Two	running and maintenance	I	Building management system, and the implementation	management capabilities
		II	regular network configuration and management of server optimization	configuration and management of server
		III	Maintenance routers, switches and other network equipment	computers and network devices configuration and maintenance of equipment
		IV	Stable operation and server protection	project management capacity

Understanding the job required of professional competence, we want to reach out further analysis of the ability to learn what this knowledge as a basis for curriculum development , the relationship between them is shown in Table 3 according to the needs of the capacity of this solves the "how to become such a person " problem. Computer teacher to complete these tasks to target curriculum organization and teaching arrangements, it is entirely in line with the needs of business work, you can enable students to apply their knowledge to achieve results.

TABLE III. ANALYSIS AND CURRICULUM

Network Engineer tasks		Professional competence required		task learning courses
Task Two	running and maintenance	I	network management capabilities	network management and network security
		II	configuration and management of server	computer network -based Windows Systems management , Linux system administration , database
		III	configuration and maintenance of computer hardware	equipment maintenance, network management and maintenance of network equipment, network security
		IV	project management	project documentation writing

B. increase the school-enterprise cooperation and innovation practice teaching mode.

Training as an important part of the process of vocational education, is a key step vocational students' professional ability and quality improvement. Currently, the increase of school-enterprise cooperation, especially cooperation with the IT industry enterprises to realize the development and application of vocational education training system is significant. Need to develop vocational education training system, you first need to conduct training base construction vocational colleges, vocational colleges training base is the foundation to ensure the implementation of vocational skills training and appraisal, to be implemented in accordance with the practice of teaching and vocational skills appraisal system the construction base. Higher education should be "for the implementation of an open society, a variety of schools, from the ideological dismantling Chinese -style universities ' walls ' efforts to expand the entire school-enterprise cooperation, mutual benefit and interactive way to conduct personnel training, research collaboration model, for each Multiple types of training model innovation structure operating mechanism, the

formation of school resources for development and for the community, market-oriented independent school situation " [1], to absorb the social educational resources in common areas to establish training bases, research centers and school-run enterprises exploration and innovation, to achieve " win-win" development in cooperation with the enterprise; followed by the need to integrate related courses, to establish employment-oriented training system, which includes hardware maintenance training system course technology, network technology, database technology, programming techniques, business processes, etc. , as shown in Table 4. In the training system can also establish the amount of knowledge library can help students to accumulate reserves of expertise and practical experience, and its main contents include: a typical case studies, FAQs , forums and so on. Through training, students can focus on jobs and environmental adaptability, engineering application capabilities, interoperability, self-learning and innovation capacity, thus speeding up the transition from student to employee's identity, forces practitioners to enhance students and practitioners' confidence.

TABLE IV. TRAINING PROJECT

Stage	project	training courses	target
I	simulation training and installation	hardware maintenance, network technical management	perception and experience of business operations , management systems, business processes and corporate culture
II	ERP system simulation training	database technology, network technology , enterprise management	experience of business management processes involved in business processes , combat training professional proficiency
III	software development Training	database technology , programming, technology, business processes	enterprise development project to simulate real teaching cases , improving the level of software development theory and application skills
IV	companies consolidated combat	synthesis	the corporate scene for enterprises to solve computer-related technical issues

C. Strengthening EQ education, training in modern professional personnel

American scholar Daniel Gorman in his book "Emotional Intelligence" that: "The real key to success determines whether a person is emotional intelligence capabilities rather than intelligence capabilities," Chen Dong Chinese scholars have proposed a "successful EQ education, not only can help a student to gradually build strength of personality, culture and create a healthy life, you can let the computer teaching efficiently, cultivate a healthy, comprehensive secondary computer professionals" [2]. As the computer industry with technical updates fast, logical, teamwork and strong features, which makes the amount of the individual's knowledge and mental level is difficult to complete a comprehensive and complex nature of the project, the team must rely on the collaboration, thus strengthening vocational EQ student education and training needs of production and construction suitable for computer-related fields of modern professional talents with the overall quality is very necessary. This requires strengthening the professionalism and job-related and vocational education, training mainly from several aspects as follows: First, strengthen the training of professional interest, will train students in vocational interest and inspire them to improve student learning initiative and overall career quality; second, students jobs awareness and professional ethics, responsibility and work to strengthen educational norms, ethics training is increasingly affecting the vocational students land jobs, such as with team spirit and ability, the program has become members should have the basic qualities. Teaching vocational colleges need to establish

comprehensive quality evaluation system, the teamwork, interpersonal communication, such as the ability to integrate into various courses, curriculum design, the non-professional quality educational content (moral, civic literacy, cultural training, etc.) into the quality credits, will implement the concept of quality education to all aspects of teaching, strengthen emotional intelligence education, so as to nurture people with the overall quality of the modern professional talent.

IV. CONCLUSIONS

For a long time, China's biggest feature is the re-education imparting knowledge, light ability, ignore the overall quality of students' education, although students firmer foundation, but innovation is not strong, the development is not comprehensive, resulting in less competitive graduate employment, vocational computer personnel training is no exception. Thus, the paper argues that the computer vocational education vocational colleges, the labor market needs to follow the law of growth and talent to construct teaching setting, innovative practice teaching model and strengthening emotional intelligence education is an effective way to improve the overall quality of students' abilities and job applications critical Path.

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