Applied Undergraduate Colleges and Universities Computer Skilled Personnel Training Mode Analysis

Gao Shijuan[1]

[1]Zhengzhou University of Industrial Technology, the School of Information Engineering,   451151, Henan, China

Keywords: Computer Science, Practical Talents, Applied Colleges, University-Enterprise Cooperation

Abstract: At present, the computer professional universities students' employment situation is not optimistic, according to the current social demand for computer talents and analyzes the current problems in the teaching of computer professional education, computer skills in applied undergraduate colleges cultivate some Suggestions are put forward, in order to cultivate practical talents for the purpose, reform teaching system and curriculum, university-enterprise cooperation, strengthening the construction of teaching staff.

Introduction

The 21st century, with the wide application of computer, especially the popularization of Internet applications, computer science and technology and its application in China has greatly developed, the computer professional education also get larger development. However, the current situation of computer professional is most computer professional graduates lack practical application development and design ability, nowadays, not well the application of the knowledge of computer science and technology to the production and living. Computer professional in the job market is the enterprise needs a large number of personnel on one hand, but it is difficult to choose satisfied job seekers; On the other hand is trained graduates of colleges and universities is difficult to meet the needs of the enterprises, the employment rate has been falling. Today, the increasing popularity of computer, information society needs what kind of computer talents, colleges and universities how to adjust the computer along with the development of the information society the cultivation of the professional direction and teaching method, computer class culture can meet the demand of social talent is worth a problem of higher education concerns.

To computer talented person's demand is decided by the social development environment, China's national information process has and will continue to have important effects on computer talented person's demand. With the deepening of China's information process, computer professional obtain employment domain also gradually expand, the graduates can be in scientific research, education, business, business, technical and administrative management, and other units or departments engaged in computer teaching, software development and maintenance, information system construction and maintenance, computer related technical consultation and supervision, etc, can be engaged in profession including software and hardware development engineers, software testing engineer, technical support engineer, information engineering supervision engineers, network integration engineers, system administrators, and other professional and technical positions. In addition, many of the computer industry enterprises and institutions also need a lot of familiar

with the technology in the computer professional computer professional engineers. However, computer professional graduates employment choice is so wide, are faced with the problem of employment. Under the background of economic globalization, enterprises and institutions have great survival pressure, on the one hand, enterprises should strive to improve their ability to compete in the market; and on the one hand, enterprises need to cut costs, reduce its operating costs. In the present employment situation and enterprise competition condition, the market appeared some kind of "supply" phenomenon. Therefore, the enterprise when recruiting employees, have more choice and at the same time put forward higher requirements.

Investigation shows, the enterprise in different head to applicant require different professional skills. Director of human resources is that graduates must have professional skills are: programming practice ability, operating systems, databases, and IT project managers think that graduates must have professional skills, respectively is: programming practice ability, data structure and algorithm of knowledge, besides, in turn, requires a database, software engineering, and the operating system. 87.9% of director of human resources and 81.7% of IT project director will consider candidates practice experience in recruiting employees. Many companies will see whether graduates took part in a project or an internship, and whether it has held the post of student cadre etc. 57.7% of IT project head, said will arrange new employee direct access to work first, and then in practice according to the need for targeted training.

Computer Professional Development Present Situation and Existing Problems of Colleges and Universities

The root cause of the computer professional college students "employment" excess is not a talent, but the structural imbalance between supply and demand. At home and abroad in recent years, although the colleges and universities and academic organizations are actively exploring the computer science and technology professional talent training mode reform, but due to the "91" teaching plan and the impact of this professional theory system, professional teaching plan is still not out of the original curriculum system framework, as well as students have relatively complete theoretical basis, and emphasize how to cultivate students good practice ability, some theoretical depth, the difficulty of the course in the teaching plan still occupies a large proportion, and some applied strong difficult to fully into the teaching plan. For colleges and universities to train applied talents, more can neither let students grasp the solid, complete professional theoretical foundation, and can't improve students' ability to skilled application problems, resulting in the situation of poor actual effect in one sector, which led to the social demand for computer professionals are on the increase, and on the other hand, a large number of computer the contradiction between supply and demand of graduates cannot find jobs, reflects the computer science and technology of the actual problems existing in the professional personnel training. Therefore, whether it is in accordance with the development of higher education theory, or in the process of practical education, should train students' correct, basic experimental method, method and application of skills, for students should be required to have the necessary theoretical basis and some technology development and application ability. At present, computer science and technology professional training talents are the main contradiction in the process of:

According to the old model of talent cultivation of the computer science and technology, computer science and technology subject is about the algorithm of knowledge, cultivate the talents must have the ability to develop algorithm research and application. This is a professional academic development and research oriented cultivation model, in this mode, the school attaches great importance to the system of theoretical knowledge to teach, despise application skill, strengthen the

training focuses on cultivating the talents the administered, academic, lack of independent ability to solve problems; The application of computer development, management tools and methods are not ripe, inadequate experience, lack of abstraction of reality. Information society needs in a professional to guide training mode, wants to cultivate the students not only have solid basic theoretical knowledge, but also has strong practical ability. Enterprise requires hiring graduates after the per-service training for a short period of time can do their job, for computer class graduates, students are required to have the very strong beginning ability, experience of project development, professional foundation is better, able to skillfully use computer technology or methods to solve some of the problems in daily work. Comprehensive analysis, the main factors of computer professional graduates "employment" has the following:

Professional irrelevant to the development of the society. Theoretical study and knowledge popularization of higher education in computer science has a good advantage, but for the training of applied talents of social demand on some single.

The dated teaching methods and content. The current setting of the computer professional course for most applied colleges still along major setting scheme of according to many years ago, not with the development of computer science and the development of computer application in step.

Lack of internship practice. Most colleges and universities on curriculum design, graduation design as a internship practice link, the practice subject one-tiredness, and enterprise applications exist decoupling, the lack of a system, comprehensive, fully internship practice.

The teachers construction lag. More than a line of computer teachers teaching focuses on the theory, the heavy teaching task, have no time to engaged in the development of application projects of scientific research work, lack of practical experience, not on computer applications providing students with better guidance advice.

In View of the Teaching Model Reform Suggestions

Comprehensive the above analysis, in order to promote the development of China's information process, to improve the computer professional graduates employment, need to reform the current teaching mode. The author working in Software Company for several years, as well as the related experience in teaching in colleges and universities engaged in front line put forward some reform Suggestions:

Change the teaching idea, take the market as the guidance, cultivating practical talents for the purpose of the current, most colleges and universities to train type theory, the research of computer talent, for the purpose of this training concept accord with the needs of the early development of computer technology in our country, at the time of the condition, the computer technology in the theoretical research and extension stage, slow development trend, theoretical research is conducive to the further development of computer technology in our country. In recent years, with the development of computer technology, computer technology has been applied to the production of all aspects of life, the society needs a large number of computer application and technical personnel, the enterprise needs to have certain practical experience, can quickly into the work, strong ability of graduates, and colleges and universities is still a large number of theoretical model and research computer talents, due to a lack of good practice in the in the process of cultivating the practice link, cause they are still lacking in the ability to practice, already can not adapt to the information society's need for computer talents, colleges should abandon previous education mode, Genning the development of the society, establish a market-oriented, for the purpose of training applied talents, combined with social development dynamic, actively explore the new personnel training mode.

The reform of teaching system and curriculum. Starting from professional training target,

teaching system design to the market as the guidance, to cultivate the students master the basic theories of computer science and technology, basic knowledge and application ability of applied talents. At the same time the attention to students' professional ethics and team cooperation ability, organization and management ability, etc, the cultivation of comprehensive quality, so that the students have good professional quality, professional ability and practical working ability, the coordinated development in terms of knowledge, ability and quality. Colleges and universities on the premise of grasp the market demand, should according to the social demand for different application direction of computer application teaching direction, such as computer network, database technology, software development, software engineering, embedded technology, etc.; On the curriculum, should be closely combined with the application direction choose teaching course, to lay particular stress on, something has to give up; Could be divided into public required course teaching courses, public elective courses, professional required courses, professional electives, for the specialty of the compulsory courses and elective courses, must have corresponding curriculum design, curriculum design should keep pace with The Times, keep up with the need of enterprise applications, combined with the main points of the course, let the students to study in theory into practice immediately after you make it in the direction of the applied course on the basis of deep understanding of curriculum essence.

The university-enterprise cooperation, practice base construction project as the dominant practice. Professional course of study and the course is designed to let students to the professional courses have a thorough understanding, to master the basic application ability of this course. In the enterprise applications, the need to the integrated use of mufti-disciplinary theory and application of knowledge of the course. Knowledge comes from practice, in order to improve the students' comprehensive ability to use, can try university-enterprise cooperation, establish a project practice base for practice. University-enterprise cooperation, is to put students into the enterprise practice, observe, study and participate in the production of enterprises, this can let the student much earlier contact with enterprises, insight into the enterprise demand for computer application, thinking ability to use knowledge to solve practical problems, to strengthen the study of theory and practice of the course, to master the latest trend of the development of industry computer; Establish dominated by project practice internship base, can let students have the chance to participate in the project development practice, and strive to make the students to participate in one or more of the enterprise application development process of the project, from project requirements definition, project design, project development, project test run to the maintenance of the project. After the process of learning and exercise, the students can apply theory courses of study and practice ability, on the one hand, deepening the students understanding of computer applications, increase the students' interest in study, on the other hand, the enterprise application project has certain complexity, time limit, also put forward higher request to the classmates, driven by pressure, exercise the students' practical ability, the ability to solve practical problems, also exercise the students to communicate with others cooperation team spirit.

Build a mature double type teaching staff. To cultivate applied talents for the purpose of teaching model also put forward higher requirements for teachers, which requires not only has the ability of theory teaching, but also should have the project design and development ability to apply double type teachers. Double teachers have practical application development experience, in teaching theory courses, can grasp the main points of the course deeply, and connecting with the concrete examples to explain, in teaching practice internship program, the problem of application projects can be analyzed thoroughly, coherent, convenient for students to understand and grasp the theory and practice of knowledge, but also can on the students professional technology, employment give

active support and help, but also sets an example for applied talents. Schools in the process of construction of the double team, can take many forms, flexible can encourage and support the theory of specialized course teachers to participate in enterprise application development of the project, make the teacher get the opportunity to practice and improve application ability can also be hiring in the development and application of a line of personnel to the colleges and universities engaged in practice internship teaching work.

Conclusion:

Applied computer major in colleges and universities is a skilled professional and practical pay equal attention to, in order to make the professional college students can quickly adapt to the job, you need to improve the practical operation ability of computer professional students, applied colleges need to change the original computer professional teaching, take the market as the guidance, in order to cultivate applied talents as the goal, to reform teaching system and curriculum design, actively strengthen cooperation with enterprises, build students' practice internship base, build the double type teaching staff.

References:

[1] Wang. Optimization of talent training mode - to improve the competitive ability of the computer professional students' employment [J]. Journal of computer education, 2007.

[2] li, Chen ping, Chang min, Thu Minuet. Research report on computer talent demand [J]. Journal of computer education, 2004.

[3] The research and practice of practical computer professional talents cultivation model [J]. Journal of Reckoning education research, 2007.

[4] li reiterated, the nature conservancy council, yo-yoking tan. Applied undergraduate colleges and universities of professional personnel training mode, information and computation science [J]. Journal of Changsha University, 2009