Enhancing University-Enterprise Cooperation by Meeting the Needs of Market— Tentative Idea about University-enterprise Cooperation of Software School*

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Abstract: By exploring the reasons leading to problems in university-enterprise cooperation, the paper explains the collaboration necessity in talents training between demonstrative software school and enterprises, puts forward conventional solutions and probes into the feasible modes of introducing resources from different channels. In addition, analysis is also made into possible stages in which problems might arise.

Key words: demonstrative software school; university-enterprise cooperation; training tailored to enterprise needs
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1 The Necessity of University-enterprise Cooperation

The purpose of cultivating students of software school is to train the international software talent with application ability, all-around ability and high quality. A talent with application ability is someone who gains the work ability and the work practicing ability. A talent with all-around ability is someone who gains the corresponding foreign language ability as well as the professional occupational background, including management, finance and so on. To be a high quality talent, a student should learn how to be a good person and then be conscientious, diligent and acquire the spirits of solidarity, cooperation and communication as well as the communication ability. A international student is someone who possesses the international view and thinking style, who realizes the international rules and laws aimed to satisfy the need of international software talents. The software school could not train the software technology talents with all above four qualities without the help of external society, governments and enterprises.

At the present time, the traditional ways of training software talents in universities hamper the development of the software industry. One hand, many graduates of computer profession can not get suitable jobs. On the other hand, software enterprises can not find the standardized talents with technology ability and application ability. It may cost a huge number of time and energy that enterprises choose and train fresh employees in the course of employing talents. Though it costs much, the result is always dissatisfied. The phenomenon shows problem of the lack of the balance between the training and the market requirement. The most important thing is that join enterprises and the mechanism of practical talents into the educational course of the undergraduates. It is important to form the excellence phases of strong cooperation between universities and enterprises and being able to effectively train enough software technology talents with application ability.

There exists a lack of communication between universities and enterprises. Both sides are poking for instant benefits in terms of students training and have some misunderstandings. The enterprise complains that students cannot meet its need, while the university thinks that the enterprise is critical in choosing students. The reason lies in the lack of communication. Therefore, without enough understanding of the need of enterprises and markets, the university fails to offer courses which satisfy the need of enterprises. As a result, students, to some extent, are not equipped with practical engineering ability. At the same time, enterprises can not be involved in student training due to the lack of communication. One more reason is student's wrong self-expectation. Without clear idea of necessary skills and basic qualities of IT talents, they do not know how to learn. The above reasons lead to serious

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drawbacks in software talent training mode, students training are not in accordance with the needs of enterprises. This is something calling for immediate reform.

To the sofewarwe school, it must be strengthen the cooperation with enterpries, especially to change the mind of teaching, follow with the pricple of innovation, the way of running schools must face social and market. Innovata the model of running school, strengthen the cooperation of industry, school and research, it can be achieved through the school's enterprices. The software school must have the idea and use it through teaching. If not, it will hard to develop high level, high quality engineering talents. It can provide service through strengthen the students' skills and experence of engineer. To adapt the need of enterprise, it can add and adjustment the majors. To adapt the need of enterprices, it can modify the courses and plan of educate. The school must service for the development of software, expand the scale with the developp of software. Follow with the government's plan of software industry, adjust the layer, major, model, form. With the famous enterprise afford the service to society in term of build software designer training base.

The university should do a good job in its internal work in the university-enterprise cooperation.

① Ensure the quality of the personnel training to build up a relatively high level of teaching staff, both full-time and part-time, with a global outlook and rich experience in teaching.

② Develop the social-oriented subject construction, aiming to train high-quality software talents. Relying on the rich and multi-type resources to develop the cross-discipline of applicable type.

③ To foster advanced education ideas and concepts, reform the traditional teaching model, provide a first-class education environment and attract high-quality sources.

④ The school must have characteristics, we must strengthen cooperation with foreign universities, link up with international rules, and cooperate with the well-known domestic and foreign IT enterprises, building up stable production and research base and internal software parks. we should strengthen the foreign language teaching, with emphasis on cultivating students' foreign language communication capabilities and doing more engineering practice, to enhance the competitiveness of students.

2　The Characteristics and Advantages of University-enterprise Cooperation

For the universities:

① The close combination of the advantages between theoretical teaching in the curriculum system and enterprise projects, provides students with the fastest and the best training programs, and raise their one-time employment rate.

② Help the universities establish a fullly industry learning development system and help the students with their career development planning, to be clear of their learning priorities and objectives, enhance their consciousness and enthusiasm of study, while develop a canonical professional behavior, which would largely expand the social impact and enhance the overall efficiency of the community.

③ Help the Universities and enterprises build a close cooperative relations in training program, promote the comprehensive and further development of University-Enterprise cooperation.

④ A overall University-Enterprise cooperation, on the one hand, can develop the University's scientific research projects channels and enhance its research strength. On the other hand, the students trained by the University could be more social competitive and the students employment rate would be higher.

For enterprises:

① For the moment, the most requisite for the software enterprise is the software-development staff with over one-year hangs-on background, who are also hard to get at short notice. The strategic collaboration between university and the enterprises could not only supply substantive talents for the company, but also provide the postgraduates an opportunity of twelvemonth working in the company. Once the software engineering masters graduate, they are equipped with one-year actual working experience, which meet the need of advanced aptitude of the enterprises.

② Often, it will cost amount of resources to teach a new comer familiar to all the working process. It is time-consuming as well as high-costing, seldom leading to satisfying result. However, the solid-training system and strategic frame established between software school and enterprises are bridging the university, enterprises, training institutions and other social-running institutions. Through leaguing the software manpower training institutions and other combined cooperation with the enterprises, the regional software industry resources can be reformed, providing the HR supportive services. After collecting and analyzing the demand of aptitude to the software talents, the enterprise can collaborate with the software school and other talent cultivation institutions, making an industrial-chain mode which combines the talent cultivation and employment together, solving the long-existed bottleneck problem of shortage of prac-

tice.

③ It reduces the risks among traditional recruiting processes. As there are many-times rigid tests, the mistakes which usually exist in the traditional recruiting processes could be avoided, enhancing the success rate of introducing into talent people.

④ Another benefit coming to the enterprises is the HR department could devote more energy to spur the employees to full-play their capability to their job.

⑤ The co-designed disciplines by school of software and the enterprises, the teachers who own amount of software experience, the advanced courses system, plus the rigorous teaching administration guarantee the students will enjoy the real-conditioned working environment, as well as the enterprises will be supplied with utility-type talents, solving their manpower shortage problem.

⑥ Through the compact university-enterprise cooperation, we can work from the overall perspective as well as the global perspective, and further put our stress on the mechanism innovation, thought innovation and content innovation, which will reduce the cost of product development. Therefore, the focus of the enterprises' work will shift to marketing. It lowers the managing cost as well as the operating risk, which consequently enhances its kernel competitive power.

3 The Contents and Form of University-enterprise Cooperation

① The bilateral aiming to cultivate the competent software talents. The bilateral can develop a long-term collaboration by the establishment of software engineering practice base in the enterprise.

② Relying on the regional software manpower training league, the school of software can offer plenty of competent talents for the companies, who are responsible for the cultivation and training of the students, assisting to their job-hunting. By arranging the courses system and winter-summer vacations, the school is able to transport full-dose and qualified students to enterprises, ensuring the compact working-studying relation, intensifying the students' working capability and strengthening their empirical accumulation of project practice.

③ The horizontal scientific research collaboration. The bilateral could depend on the school's researching ability and make sure the enterprise knows clearly the needs of the market and researching goals. Then the school organizes its researching power to investigate the product directionally, carrying out the collaboration omnibearingly for the complementation of the predominant resources.

④ After the training of the talents, the school could, through the related personnel skill assessment department, extend the regional software certificate.

⑤ It is highly possible to build a fix edition in each other's website, which intends to propagandize the engineering practice base of the school, and organize the students regularly to visit and work in the base.

⑥ The school can still provide its exclusive soft-hardware practice environment. According to their own specific vocational predominant resources, the bilateral should together fix the training courses and teaching material, and cultivate the software talents. The other related governmental departments can help offer other practice places and working opportunities.

Specifically, the school should be in charge of the following tasks:

① Use teaching business management and the related functions to ensure adequate source and high quality of Practical Training students.

② Equipped the customized software training students with full-time professional counselors, who are responsible for the students' study statues and teaching management.

③ make full use of the school website, the Department Head, the class teacher, counselor and student groups to advocate the software talents' customized training model, organizing students' participation in the cultivation program held at the customized software talent base build at software College by the enterprises.

④ use all kinds of college resources and channels to cultivate fosters targets and recruitment targets to the enterprises.

⑤ Employ enterprise instructors and integrated joint participation of extensive social resources to join the personnel training process.

⑥ Organize school activities, such as job fairs, seminars, various cultural and sports activities, etc., providing the necessary resources.

For enterprises, they should implement to complete the following tasks:

① provision of standard Training Course System;

② provision of the training space, equipment, teaching staff and standardized management.

③ provision of its employing demand and recruitment information.

④ Provide work opportunities to the enterprises' customized training students and the students who have passed the enterprises' test recommend them to obtain employment.

⑤ Taking mutual development, personnel training and talents-supporting as Orientations, the enterprises

should build a joint laboratory or develop research projects with software College, and Provide with funding and other supports.

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