Innovation and Practice of Computer Applied Talents Training Mode under School Enterprise Cooperation Education Mode based on Big Data

Yuan Wang¹, Xueyu Wang¹, Yingyan Lin¹,*
¹Changshu Institute of Technology, Jiangsu, China, 215500
*Corresponding author e-mail: linyingyan@cslg.cn

Abstract. The traditional training mode of computer applied talents is not perfect. The course content of the school almost only includes theoretical study. The lack of practical teaching leads to many computer graduates do not meet the requirements of social enterprises [1]. Many school graduates of computer science will not flexibly use the knowledge they have learned. In order to effectively solve this problem, the Ministry of Education decided to adopt the mode of school and enterprise joint education to cultivate computer professional application-oriented talents. The combination of industrial enterprises and education is a key opportunity for school talent cultivation. This paper briefly introduces the traditional university enterprise cooperation of computer personnel training mode and puts forward its main shortcomings. On this basis, this paper puts forward the innovation strategy of computer application-oriented talents training mode under the school enterprise cooperation education mode.

Keywords: School Enterprise Cooperation, Computer, Personnel Training, Innovation

1. Introduction
With the gradual acceleration of the progress of today's society, the economic and social requirements for computer talents become more and more high. The traditional talent training mode in Colleges and universities is no longer in line with the standard of modern career choice. They only focus on students' theoretical achievements. This situation leads to a lot of computer professional graduates can not flexibly use the knowledge they have learned. Just after graduation, they are facing the crisis of unemployment. This situation has attracted the attention of the Ministry of education. The Ministry of education hopes to strengthen the training mode of applied talents of computer major by means of joint running of schools and enterprises. This policy soon received positive feedback from universities and enterprises.

Many colleges and universities have formulated the early talent training mode of school enterprise cooperation. Through the docking of the computer major in the school and the enterprises in the related industries outside the school, the school hopes that the talent training mode of computer major can be further developed [2]. Unfortunately, however, the effect of such a scheme is still unsatisfactory. According to the research of education experts, they found that the channels of communication...
between schools and enterprises in the early stage were not flexible. This is a normal phenomenon of school enterprise cooperation in the embryonic period. We need to develop innovative programs to explore new practical strategies of talent training mode of school enterprise cooperation. In order to verify the correctness of the above theory, this paper puts forward the main defects of the traditional combination of production and education. On this basis, this paper puts forward the innovative strategy of computer application-oriented talents training mode.

2. Theoretical analysis of school enterprise cooperation of computer major

2.1. Main ideas of school enterprise cooperation
The development of computer science should follow the adjustment of social economy and the structural change of computer industry. Therefore, one of the main ideas of school enterprise cooperation is to serve the society. Due to the rapid development of computer related industries in recent years, the probability of entrepreneurship of computer professionals is very low. The second main idea of school enterprise cooperation is that the training of talents should be based on the selection standard of enterprises in the industry (see Figure 1).

![Figure 1. Concept map of talent training in school enterprise cooperation.](image)

2.2. Main implementation strategies of school enterprise cooperation
Schools must first develop new teaching resources for personnel training. Teaching resources should be inclined to the practical standards of enterprises. Schools and enterprises need to jointly develop the most favorable teachers. The teachers who take theoretical learning as the teaching standard are shallow. The school can recruit managers with sufficient social experience as the teachers of the school's auxiliary teaching. Finally, schools and enterprises need to innovate traditional teaching methods jointly.

2.3. Innovation of school enterprise cooperation based on social needs
Computer professionals are the most scarce force in today's society. Applied talents can not only effectively help the development of the computer industry, but also help the social economic development towards greater prosperity. However, the upper limit of the traditional talent training mode of school enterprise cooperation is fixed. In order to better formulate the cooperation mechanism between schools and enterprises, we must put forward the innovation of school enterprise cooperation.

2.4. Main advantages of school enterprise cooperation
The development of enterprises can promote the progress of social economy. The development of schools can promote the output of talents. The development of enterprises needs a continuous stream of computer professionals. The development of the school needs school enterprise cooperation. School enterprise cooperation can help ordinary universities to transform into application-oriented universities.
It speeds up the speed of training talents. It improves the quality of the output of talent. It helps the development and progress of computer related enterprises from the side.

3. The shortcomings of the traditional school enterprise cooperation of computer major

3.1. The nature of business cooperation is very strong

The main direction of school enterprise cooperation should be to achieve the goal of talent training. Due to the new application of computer industry and the rapid update of theory, many school enterprise cooperation stay in business cooperation. Commercial cooperation includes the sharing of scientific and technological achievements and the commissioned development of projects. This way of cooperation can provide more benefits for schools and enterprises. However, it is of little use to the training mode of talents (see Table 1).

3.2. Lack of motivation for enterprises to participate in talent training plan

Many computer related enterprises pay more attention to the immediate interests. They think that the output of talents in Colleges and universities can not meet their standards, or they do not need talent support from colleges and universities. In addition to this, colleges and universities are not willing to cooperate with enterprises. To sum up, the motivation of many interest oriented enterprises to participate in the talent training plan of colleges and universities is insufficient.

3.3. The utilization rate of enterprises' resources in Colleges and universities is not high

The application-oriented talents training mode of computer specialty in some universities is not mature. They think that the cooperation with enterprises should be postponed. There are many kinds of enterprises in the computer industry around the address of many colleges and universities. However, the utilization rate of the resources of these enterprises is not high. This is due to the internal closed development policy of colleges and universities. The development of colleges and universities must avoid closed self exploration.

3.4. The communication mechanism between schools and enterprises is inflexible

This kind of phenomenon generally occurs in the talent construction of the newly started school. The effect of communication between schools and enterprises without experience of school enterprise cooperation is very poor [3]. Generally speaking, their communication mechanism is inflexible. Another situation is that enterprises without cooperation experience do not believe in the policy of talent support of colleges and universities. This situation will also lead to communication problems between schools and enterprises.

| Main problems                          | Summary of causes                              |
|----------------------------------------|-----------------------------------------------|
| Enterprises and schools pay more attention to income | Highlight business cooperation                |
| The immaturity of talent training mechanism | Lack of motivation                             |
| The development of school's self closing   | The utilization rate is not high               |
| The two sides have no experience in cooperation | Communication is not flexible                  |

4. Research on the mode of computer application-oriented personnel training with innovative school enterprise cooperation

4.1. Training of knowledge system of talents

This stage is the embryonic stage of talent training mode of school enterprise cooperation. It emphasizes the importance of learning. The important goal of the budding period is to make graduates have a complete system of computer knowledge. Schools should enable graduates to apply their knowledge flexibly. On this basis, they should be able to master the computer professional enterprise project development basic knowledge. This is conducive to their successful completion of the next
stage of training plan.

4.2. Putting forward the practical training topic of the enterprise
Schools can apply to enterprises for various forms of computer professional projects and projects. These subjects are distributed to students as practical training topics for personnel training. Students need to complete the corresponding tasks according to the content of the project. The purpose of the training project is to make students have the awareness of project development. It can help students to have the level of enterprise function and technology of computer major. In this stage, the project content of simulation is mainly used.

4.3. Post practice courses provided by enterprises
Schools can divide students into different groups. The staff of enterprises provide different post practice courses for different groups of students. After learning the course, enterprises can let students experience the work content of different positions according to the standards of interns. In this stage, students can learn the knowledge of different positions. According to the arrangement of practice courses, students will have a better understanding of the management mechanism and talent requirements of relevant enterprises.

4.4. Internship stage before graduation
When the students are facing graduation, the school must lead the students to complete the work practice before graduation [4]. Different from the third step, there is no curriculum in this stage. All the work is done according to the standards of interns. All students are not required to complete the content. According to this practice stage, students can strengthen their own autonomous learning ability. Some students can also understand the technical requirements of relevant positions in advance.

5. The practical strategy of computer application-oriented talents training mode under the school enterprise cooperation education mode

5.1. Formulation of management mechanism and coordination mechanism
The goal of the establishment of the management mechanism of the school enterprise joint school is to manage the students to complete the talent training plan jointly by the school and the enterprise. The goal of the coordination mechanism is to smoothly carry out the talent training program under the joint coordination of the school and the enterprise. Enterprises and schools should participate in the formulation of management mechanism and coordination mechanism. The content of these two mechanisms must be well-organized. The division of labor between schools and enterprises must be clear.

5.2. Development of innovative curriculum system
The training plan of talents mainly depends on practical courses. However, schools can not only set up corresponding practical courses. On the basis of traditional computer teaching, schools need to make a complete arrangement plan of computer knowledge system theory courses. The arrangement of theoretical courses should account for 70% of the total class hours. Arrange specific practical courses during the study of theoretical courses. The arrangement of practical courses should account for 30% of the total class hours.

5.3. Establishment of training base for school enterprise cooperation
The premise of the arrangement of this practical scheme is that the funds of schools and enterprises are sufficient. If the distance between the enterprise base and the school base is far away, it is unrealistic for students to arrange frequent training courses [5]. Schools and enterprises can respectively transfer some funds for the construction of training bases. The location of the base can be near the school. The practical training base can adopt the practical teaching mode different from the school's theoretical
courses to complete the actual training.

5.4. The construction of professional teachers with school enterprise cooperation
Many teachers of college computer professional are better at theoretical teaching. There is no doubt that they can help students improve and sort out the theoretical knowledge system of computer science. Some technical managers of enterprises are better at the application of computer technology. They can also be employed by schools as practical teachers. These practical teachers can be arranged in the training base. There is no doubt that the professional faculty of this kind of school enterprise alliance is very strong.

6. The innovation of knowledge assessment of computer application-oriented talents training mode under the school enterprise cooperation education mode

6.1. Computer professional knowledge quiz competition
The study of computer theory knowledge is very boring. Students are generally bored. In order to help students better review what they have learned. Schools can use the form of computer knowledge quiz contest to assess students' computer knowledge learning. Of course, compulsory measures can not be adopted in this competition. Otherwise, it will lead to the deepening of students' boredom.

6.2. Vocational skills competition provided by enterprises
Through a period of time of enterprise internal post course learning, students can master a lot of theoretical knowledge of the post. Through the practice of related positions, students can master a lot of vocational skills. Enterprises can provide some vocational skills competitions. Students have mastered the professional skills they are proud of. Vocational skills competition can help students improve their innovation ability and practical ability faster.

6.3. Innovation of assessment mechanism for theoretical and practical teachers
There is no doubt that the knowledge system of teachers in each subject is single. Teachers who are good at theory teaching know more about theoretical knowledge. Teachers who are good at practical teaching are better at vocational skills knowledge. We can add some professional skill knowledge assessment in the form of teacher's assessment of theory teaching. The assessment of some theoretical knowledge will be added to the assessment of theoretical teachers. This assessment mode can promote the comprehensive development of teachers.

7. Conclusion
In order to guarantee the quality of talent output, schools should guarantee the innovative development of talent training mode [6]. The form of school enterprise joint education can not only help ordinary colleges and universities to transform into application-oriented universities. It can also meet the talent needs of enterprises. There is no doubt that the innovative research on the training mode of computer application-oriented talents under the school enterprise cooperation education mode is very necessary. The author thinks that it is a landmark policy for the joint development of colleges and enterprises in the future.

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