

# *The Training Strategy of Creative Talents in the Teaching of Computer Software Development*

**Jianv Wu**

*Haikou University of Economics, Haikou, 571127, China*

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**Abstract:** The computer software development specialty has relatively high requirements for the comprehensive skills of talents. In order to cultivate excellent talents of information technology, we should innovate the training strategies of talents in professional teaching, and deeply realize that information technology is a technological revolution in recent years. We should pay attention to the comprehensive skill training of computer software development professionals, and understand the core points in the training of innovative talents and the difficulties in the implementation process. This paper analyzes the teaching characteristics of software development specialty, clarifies the innovative development ideas of current talent training, and understands the optimization strategy of training innovative talents in teaching.

## **1. Introduction**

The rapid development of information technology has promoted the current social and economic changes, changed people's daily life and work habits, and the major of software development has promoted the rapid change of information technology. To cultivate outstanding talents in software development, it is necessary to clarify the current market development trend, understand the work needs of software development professionals, and analyze the talent innovation model in combination with the current social development and people's life, which focus on talent innovation training and talent growth rate, in order to create new existing teaching models and ideas, and improve the comprehensive quality of learning.

## **2. Analysis on the necessity of training innovative talents**

The basic purpose of quality education is to cultivate talents who meet the needs of society. The educational purpose of computer software development is also to cultivate professional, technical and front-line professional and technical personnel who meet the social needs. In order to meet the requirements of quality education, computer teaching should not only impart students' theoretical knowledge, but also cultivate students' courage to question, innovate, and try. We should pay attention to the cultivation of students' creativity, so that education can truly meet the requirements of quality education, so as to achieve the purpose of quality education, so that students can open their minds, self-development and sustainable development[1].

Under the new historical conditions, the professional education of computer software development

must aim at cultivating innovative talents, renew educational ideas and methods, pay attention to students' innovative consciousness, innovative thinking and innovative spirit, so as to improve the quality of computer education. In order to optimize the quality of computer education, we must integrate innovative thinking into teaching, enable students' innovative thinking and hands-on practice, and transform innovative thinking into practical elements to truly present it.

### **3. Problems in the teaching of computer software development**

#### **3.1. Students' learning purpose and enthusiasm are not strong**

In the current teaching activities of computer software development, it is found that more students are not purposeful and targeted in learning, which leads to the unsatisfactory random effect. Many students choose computer science as their major. When they do software design, they do not consider their own interests and hobbies, nor their professional knowledge, integrate their professional knowledge and ability into their work. The reason for choosing the major of computer software development may be that most students are optimistic about the future employment prospects of this major. As for how to carry out in-depth learning and learn more professional knowledge in the learning process, there is not much concern from students, and students may be lacking in this aspect.

#### **3.2. The course content is too much but not enough**

The major of computer software development in China has a wide range of connotation and characteristics in terms of curriculum. The teaching of computer software is not a simple software development, but a collection of software sales, management, and even product related knowledge. At present, there are many other courses involved in the teaching of computer software development, which seems to bring more diversified learning opportunities to students, but these contents are more, without much essence, and most of them are simply imparted knowledge. It may enable students to have a superficial understanding of basic knowledge, but cannot accurately control in-depth knowledge. The setting of such teaching content leads to the ambiguity of the entire teaching purpose, which makes students blind in learning direction and confused in thinking.

#### **3.3. The teaching mode lacks innovative features**

In terms of the teaching of professional courses, most schools will also bring some cultural courses and ideological and political education courses to students in addition to software related professional courses, so that students can improve their comprehensive education while learning professional knowledge, and achieve the educational goal of establishing morality and cultivating people. However, in terms of curriculum arrangement, most of them focus on professional courses, and some students neglect the study of other cultural courses and ideological courses, which do not attract the attention of students and teachers. Even some teachers carry out professional training for students in one aspect in their teaching activities, ignoring the comprehensive development of students' personality and the deep excavation of students' professional knowledge and skills. In terms of curriculum setting, there is not much extended setting.[2] In terms of teaching methods, there is no fundamental difference from traditional teaching methods. There is a lack of innovative awareness and innovative behavior of overall teaching activities. Both theoretical teaching activities and practical operation activities are explained to students through multimedia equipment, which cannot give students more opportunities to operate and practice. The problems of students' learning can not be solved in the classroom, and there is a lack of innovative teaching methods, which leads to the unsatisfactory teaching effect of computer software development courses and the insufficient

cohesion of students' learning knowledge.

## **4. The training strategy of creative talents in the teaching of computer software development**

### **4.1. Student centered innovative extension courses**

In the teaching of computer software development specialty, we should adhere to student orientation and pay attention to the particularity of the subject. There are many kinds of software development majors, and the content learned is relatively small, but most of them are just generalizations. The key to cultivating innovative talents is to take students as the center, and the particularity of software development is to take software development as the basis and take students as the center. Only by truly understanding and mastering the professional knowledge in software development can we lay a solid foundation for the training of software developers.

In terms of curriculum, attention should be paid to the depth, refinement and construction of new disciplines. To cultivate creative software developers, we must conduct more in-depth professional knowledge and research, which is the transformation from quantity to quality. The development of software innovation requires deep professional knowledge, and only a certain understanding of the professional knowledge of software development can meet the needs of innovation. At present, the teaching content of the software development major in China is still very short. Schools should "downsize", simplify some unnecessary courses, and change them into elective courses, which will not be included in the examination. Instead, they should strengthen the in-depth research in the professional field, increase the selectivity of disciplines that are helpful for cultivating innovative talents, and make rational collocation, so as to scientifically and effectively meet the training requirements of innovative talents in the curriculum.

### **4.2. Taking practice as the leading factor to strengthen innovation ability**

At present, most of the teaching contents of computer software development majors only focus on theoretical learning, which is divorced from practice, and students' ability to solve practical problems is also poor. Therefore, schools should strengthen students' practical ability in teaching, appropriately add some practical subjects, and let students realize the importance of computer software development in practical application from a perceptual perspective. In terms of specialty, some courses related to creativity can be added to cultivate and stimulate students' creative thinking from the perspective of concept and clarify the connotation of creative talents.

Creative talents in the field of software development are not only highly skilled talents with practical significance, but also have high social needs. According to this feature, the school can cooperate with relevant social enterprises in a timely manner to market some courses of software development. Cooperate with software development enterprises to enable students to practice on site, acquire knowledge through practice, deepen understanding and cultivate innovation spirit. College students should always face the market, the society, and school enterprise cooperation, which can enable students to apply theory to practice at the university stage. They will encounter various problems in their work. This is a great challenge and also a good opportunity. The organic combination of theory and market training not only deepens the knowledge learned, but also really cultivates innovative talents to meet social needs from the actual.

### **4.3. Strengthen cooperation between enterprises and school education**

Through school-enterprise cooperation, more internship opportunities can be provided for students, so as to effectively improve their professional and technical level, so that students can quickly

transform from ordinary college students to high-quality society after graduation. In the training mode of "school-enterprise cooperation", the implementation mode of information technology training institutions and the school is the same, that is, according to the actual ability of the students, the corresponding post practice, so as to improve the students' practical ability, the ability to complete the software work independently, the systematic comprehensive analysis ability and so on.

#### **4.4. Formulate a scientific and reasonable curriculum system and curriculum standards**

Curriculum system is the curriculum system of a subject, which is the teaching guidance document of the curriculum nature, curriculum objectives, content objectives and implementation suggestions of a subject. Therefore, whether the design of the curriculum system and the curriculum standard is scientific and reasonable will directly affect the effect of talent training. At present, the types of knowledge involved in computer software technology are increasingly complex, and it is impossible for all students of computer major to master. Therefore, it is essential to implement a refined curriculum system and curriculum standards for computer software major, and to conduct in-depth training on curriculum standards. In order to formulate the curriculum system and curriculum standards, teachers must go deep into the enterprise, investigate deeply, and conduct in-depth research on their components, job needs and work processes. Through the analysis of the working process, the technical route and teaching thought of computer software in vocational colleges are summarized, and the scientific and reasonable teaching syllabus and syllabus are finally determined, so that the teaching content covers all the theoretical knowledge and skill operation process of teaching work.

Take Java programming in the current network environment as an example, the first is to understand the development process of the network system. The software development process includes: demand analysis, business logic design, technical architecture design, code development, code testing, and project execution. Then, in the development process of the whole system, the key points of knowledge of this topic are summarized. The main contents include: writing requirements analysis, general java technology, enterprise logic design process, Web front-end web design, background Java program development, Java program packaging, installation, release, etc. Finally, it is necessary to master the development direction of software technology, master the learning thought of software technology, and determine the reasonable and effective teaching content according to the teaching objectives, and establish a scientific and reasonable teaching syllabus and teaching norms. In formulating the curriculum system and curriculum standards, teachers should first consider the technical route and teaching thought, which determines which course teachers should teach first in teaching, and then which course to teach. For example, the development of Java program in the current network system can be divided into two aspects: one is C language, the other is java OOP, the other is Java Web programming, and the design of Java framework. The second is the structure of HTML, the style of css, the page behavior of Java Script, and the framework of Java Script. Java Object The teaching concept of programming is to first teach programming in one method, just like a process-oriented programming, then three object-oriented functions, and finally three different ways of implementation. Finally, the teacher will introduce Java's data storage and reading, including memory (variables, arrays and collections), disk file access and storage, and database access and readout.

#### **4.5. Use information means to optimize the teaching methods**

Compared with other traditional majors, computer software is a major with a large number of abstract concepts that are difficult to understand and a large number of algorithms that have difficulty in logic operation. In the process of teaching, teachers should be patient, slow down, and adopt different teaching methods. For concepts that are difficult to understand, we should use individual

cases and make a profound analysis in the case situation until students can understand. For difficult to understand the algorithm, the teacher can explain while code, while explain, at the time of explanation, as far as possible to add comments in the code, and then use distribution debugging, interrupt debugging method, let the students understand the change of variables, let students have enough time to understand the program running and variables. Computer software course involved knowledge content has strong logic and dependence, therefore, to improve the teaching effect, need the teacher carefully plan before teaching course, clarify teaching ideas, let the students know what to teach, and then teach what, how to teach, how, how to make their teaching process become clear, clear goal, in the right way. In order to avoid the negative impact of this situation on classroom teaching, we should not only record the code, but also record the records in the classroom, but also need teachers to use information technology, record at any time, so as to ensure the quality of the classroom. In the past, when computer teachers teach in class, they all teach in theory in the multimedia classroom and then operate in the computer room. However, the teaching effect is not good, so that many teachers are constantly changing the traditional teaching methods and increasing the time of practical lessons. Based on the above problems, the current computer teaching innovation talent training work should strengthen the practical work, pay attention to theoretical education, theory guidance practice, practice proves theory, both of which are indispensable.

## 5. Conclusion

To sum up, for the popular major of computer software development, teachers should reform and analyze professional courses from the perspective of innovative talent training. We should understand the future employment development direction of students in combination with the current industry development trend. In the existing education environment, we can innovate the existing curriculum, and give students more opportunities to show their own practice, so as to help students understand the current professional knowledge and skills, cultivate students' professional ethics, and truly create a comprehensive talent that meets the needs of the times.

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