Construction of Java Teaching Mode Based on Employment Orientation

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Abstract: As the Java language has been widely used in the Internet, smartphone development and other industries, it can be said that Java has developed into the most basic skills that IT-related occupations should master when they are employed. In the process of computer major construction and professional development, Java programming plays an important role. It plays an increasingly important role. The work process is introduced into the teaching process of Java courses, and the teaching content, teaching mode and teaching method are designed according to the work process, and efforts are made to enhance students' knowledge application ability and innovative practice ability, and realize the relationship between students and employment positions. Seamless. Under the new employment situation, how to ensure the seamless connection between teaching and enterprise needs is an urgent problem to be studied. Java language is a software program widely used in modern network, intelligent mobile device development and other industries, which also makes Java programming skills gradually become the basic skills that must be possessed by relevant occupations in the IT industry. The practice results show that the work process oriented model has strong feasibility and effectiveness, greatly improves the teaching efficiency and quality of Java courses, and has very high application value in Java programming courses.

1. Introduction

Java course, as an important course of computer major, plays an important role in cultivating students' programming ability and programming ability. However, as far as the current practice is concerned, after using the existing teaching materials and teaching according to the traditional teaching mode in higher vocational colleges, the students' practical ability is poor, they lack practical experience, the overall quality and skills are contrary to the training objectives, and there is a certain gap between them and the needs of enterprises. According to the Ministry of Education's spirit of “application-oriented, necessity and sufficiency” in higher vocational education, the training objectives of higher vocational education are: market-oriented, employment-oriented, and vocational ability-centered, so as to cultivate students into skilled and applied compound talents who meet the practical needs of production, service and management. In view of this, how to take the market demand as the guide, how to cultivate the high-quality and multi-skilled practical talents required by enterprises, and alleviate the contradiction between employment pressure and talent demand, is an urgent problem to be solved in the current teaching process [1]. In order to meet the needs of the current job market, most computer majors in colleges and universities offer courses related to the Java system, and the teaching of Java programming language has become a very important branch of computer programming teaching in colleges and universities across the country [2].

Java language has become a compulsory and professional course for computer majors in Colleges and universities Moreover, with the wide application of the language in the Internet, game field, smart phone development, mobile e-commerce and other industries, it can be said that Java has developed into the most basic skills and knowledge that it related occupations should master in employment Therefore, Java programming is playing a more and more important role in the construction and development of our computer specialty Only by continuously improving the
understanding and practical mastery of the theoretical knowledge of Java programming language can we realize the continuous improvement of students' employment advantages in the future [3]. However, the course content of Java programming language is rather boring, especially the study of a large number of program symbols and English often makes students feel extremely obscure. If you want to learn these theoretical knowledge well and thoroughly, and apply them to actual programming, you need students to spend a lot of time to combine theoretical knowledge with practical operation through continuous practice, so as to improve the learning effect and master the corresponding skills more skillfully [4]. Therefore, in the process of applying the work process-oriented mode, how to scientifically construct Java curriculum is a problem that teachers must think about and solve.

2. Current Situation and Existing Problems

2.1 Student Level

There are often many problems in the daily teaching process of Java programming courses. As a classic program development course, we should try our best to solve them. Due to the serious lack of connection between courses and actual positions, it is difficult to mobilize students' active learning initiative. In the process of learning Java, many students are limited to basic levels such as reading books and listening to lectures. They are unwilling to sit in front of the computer and start programming, or they are in awe of programming and dare not debug bugs. Tell students the correct answer. Although universities offer Java-related courses to varying degrees, most computer majors lack hands-on ability, practical skills and experience, and there is a big gap from the actual employment needs of enterprises, which makes it difficult for enterprises to recruit qualified Java developers who meet the needs from fresh graduates. Although spring mvc technology is very suitable for the development of large-scale enterprise-level projects, it has not received due attention in the teaching process, which is mainly reflected in the late opening of courses and less class hours, which leads to poor students' learning effect. Through the feedback from the assessment department on the course and teaching effect, it exposes students' low learning enthusiasm, and obviously lacks some ability to solve practical problems independently [5].

2.2 School Aspect

At present, the teaching mode of Java programming course is relatively simple, and so is the teaching method, which is difficult to arouse students' interest. At present, the Java programming content in colleges and universities is rather outdated, and it is impossible to exercise students' operation ability in practice. In the teaching of Java programming course, students often need to use Java language to conduct comprehensive system design practice, and students can only choose to download codes from the Internet to design for completing experimental tasks without the support of theoretical knowledge, which is extremely detrimental to the exercise and improvement of students' practical operation skills. Limited by class hours, most colleges and universities mainly teach the most basic J2SE part of the Java language system, while the follow-up javaw EB and Java EE are not opened or partially opened, resulting in the inability to systematically and consistently consolidate and cultivate students' programming and development ability in the follow-up courses, the students' learning system is poor, and it is difficult to stimulate students' interest in learning [6]. Large projects require more time for demand analysis, organization and management, implementation and evaluation. Due to the short course time, it is difficult to arrange enough time to complete enterprise level software development. Compared with the rapid technological development in the industry, colleges and universities lag behind in teaching content and can not keep up with the pace of enterprise technological development, resulting in the disconnection between enterprise development technology and college teaching content.

2.3 Market Demand

The course does not match the job market content. Java programming can't blindly teach the
content. It is necessary to understand the requirements of computer graduates in the job market through various means. Teachers can learn the job description of some job recruitment websites through the network platform, and reform and adjust the content of Java programming course through the job market analysis data released by the state and the needs of employers. At present, the content of JAVA programming course in higher vocational colleges is rather outdated, which can't exercise students' operation ability in actual practice, and a lot of knowledge can't theoretically support actual operation. Java programming courses often require students to use java language to carry out some comprehensive system design, and students can only choose to download code from the network to complete the design in order to complete the experimental task when they can not realize the support of theoretical knowledge, which is extremely unfavorable to the exercise and mastery of students' practical operation skills [7]. In addition, the teaching resources and teachers of many higher vocational colleges are relatively weak. Many teaching resources are formulated around the contents of professional courses and teaching materials, which can not meet the actual job needs of real enterprises, resulting in the decline of students' employment advantages and job practical operation ability, which is extremely unfavorable to the development of students' future employment.

3. Measures and Suggestions for Improving the Teaching of Java Courses

3.1 Analyze the Job Market and Carry out Curriculum Reform

The course reform of Java programming cannot be carried out blindly. It is necessary to first understand the requirements of the job market for computer graduates through various means. In the teaching process, the teaching mode of teachers speaking and students listening passively is changed, and heuristic teaching is used instead of traditional cramming teaching. According to the thinking process and cognitive laws of students' understanding and digesting knowledge, corresponding questions are designed to inspire students to think actively, so as to The interactive form of teaching helps students learn knowledge in an active and relaxed classroom atmosphere. Through the integration of schools and enterprises, the software development projects of enterprises are integrated into the course content [8]. At present, the projects developed by enterprises are at the forefront of development, whether programming tools or development ideas. Incorporating them into curriculum innovation, whether the application of tools or the application of Java programming knowledge, can get in touch with modern high-tech ideas and application skills in advance, which is not available to students at present or in the original curriculum content, and greatly improves students' practical operation ability and employability. Based on the previous employment market analysis, on the basis of the original Java curriculum, targeted optimization and reform should be made, which not only improves the quality of Java programming curriculum, changes students' learning concept, but also trains students to master practical application ability, so as to meet the needs of employers.

3.2 Adjust the Course Content and Emphasize School-Enterprise Cooperation

Most of the teachers in this major have rich theoretical knowledge reserves, but because they teach directly after graduation, they have no working experience in computer related enterprises or companies and lack experience in practical project development. Before improving students' practical application ability, teachers should improve their level in this regard. The school shall regularly select excellent teachers to participate in relevant skill training or send excellent teachers to relevant enterprises for practical exercise. Software engineering majors generally have good communication and interaction with enterprises, especially close cooperation with enterprises [9]. Teachers of Java framework technology course should use the resources of cooperative enterprises to participate in enterprise projects, so as to accumulate experience in software project development. When designing the course content, schools can invite professional staff and engineers from relevant positions of enterprises to walk into the campus, participate in the construction and revision of the teaching material content of Java programming course, and
constantly improve the teaching material content and related knowledge emphases of Java programming course. At present, in some training courses, the major has hired engineers from related enterprises to give lectures and participate in the training courses, with good results. To some extent, it has solved the shortcomings of lack of actual combat items in practical training courses and improved students' actual combat ability.

3.3 Guide Java Programming with Examples

In general, examples come from teachers' scientific research projects, which have certain practical applicability and can better stimulate students' interest in learning. By means of example teaching, we can better guide students to apply theoretical knowledge to practice and find the essence and essence of the problem. In order to make the function of framework simulation close to the reality, the struts configuration file is directly used in the simulation link, and the main functions of this framework are realized from scratch by using Java language [10]. For the programming tools in Java programming, sort out the theory courses and skill courses and design the system line, and set up the practice courses with these course contents in combination with the actual job application needs of the enterprise. Select teachers with strong hands-on ability and rich experience in project development as practical teachers, lead students to do technical analysis and system design on the spot, and guide students to achieve project tasks. Because the instantiation teaching is intercepted from real projects, it should be noted that the selection of content should not be too difficult and should be representative when introducing it into Java teaching. If we can grasp the link of example teaching well, on the one hand, we can enliven the atmosphere of classroom teaching and change the dull classroom environment in the past. On the other hand, we can apply what we have learned to make students understand the significance of Java programming course. The teaching mode of Java course based on working process is shown in Figure 1.

![Fig.1 Java Course Teaching Mode Based on Work Process](image)

4. Conclusions

To sum up, java course has strong applicability, practicality and professionalism. Therefore, in the specific construction, colleges and universities should, under the application background of work process oriented mode, take technology application as the core, constantly innovate teaching modes, teaching contents and teaching methods, and effectively improve students' professional ability and comprehensive quality, So as to cultivate high-quality applied talents for enterprises. From the students' evaluation of this course, what they learned from this course is much higher than their expectation, which significantly improves their interest in learning java language; From the perspective of students' employment quality, many students have signed up for famous software enterprises with high employment benefits. The establishment of Java curriculum system based on working process contains many ideas of reform and innovation, which is of great significance to educational reform and development. With the continuous improvement and development of information network and intelligent products, the quality of talents in the computer market is also
constantly improving. Traditional teaching methods and teaching modes have been unable to meet the needs of outstanding talents. Only by continuously improving the quality of course teaching and realizing innovative reforms in various teaching concepts and modes can we cultivate outstanding Java programming talents who are more solid and meet the needs of modern posts, and provide more high-quality talents for social construction, scientific and technological development and economic growth.

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References


