

Research on Teaching Reform of “C Language Programming”

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Abstract: In the curriculum system of higher education, "C language programming" course is the core course of computer major. Teaching reform plays a very important role in promoting the quality of this part of the course teaching. Under the background of modern society, the demand for computer talents tends to cultivate the innovative and practical ability of professional talents. Therefore, when reforming and innovating this part of the core curriculum, teachers should also combine the actual problems of students, promote the teaching reform of this part of the curriculum by improving the curriculum teaching system, increasing the strength of practical teaching organization, and applying diversified teaching organization models, so as to provide support for cultivating students' innovative practical ability.

Keywords: College Computer Courses; “C Language Programming”; Teaching Practice; Innovation Ability

1.Introduction

The cultivation of practical innovation ability in teaching plays a very important role in promoting and promoting students' personal growth and meeting the needs of professional talents in enterprises. As a teacher, if we can highlight the training effect of students' targeted ability through teaching reform in the core course teaching, it will play a certain role in promoting the macro effect of C language programming course teaching and the state of practical learning. As college students, the innovative curriculum teaching organization model can also stimulate their subjective interest in learning and promote them to obtain a better curriculum learning experience in practice.

2. The important value of “C language programming” design to realize the innovation reform of course teaching

2.1 It is beneficial to lay a foundation for the cultivation of students' professional practical ability

Practical application ability is the key ability of students' education and training in the teaching of C language programming course. The traditional teaching mode will bring students an objective sense of pressure. When the organizational form of course teaching is fundamentally innovated and optimized, it is conducive to helping college students obtain a more comprehensive and sufficient practical ability training and exercise experience in the process of professional course learning, and achieve the macro goal of cultivating and improving students' practical innovation ability. For students, they can rely on the practice of theoretical knowledge and program design to solve specific problems in practice, and also promote their confidence in this part of the course ^[1].

2.2 It is helpful for teachers to find the weak points in students' curriculum learning

As a relatively more technical and practical course, in the teaching of related courses, students' basic learning ability, logical thinking ability and practical adaptability will affect the actual effect of course learning. Therefore, if teachers can properly apply differentiated teaching guidance methods to guide and educate students in combination with the actual situation of students, it will help teachers find out the practical weaknesses and problems of students in practical learning in

time, so that they can combine the actual needs of students in the follow-up education guidance and complete the teaching task with the goal of solving problems. This is also an important condition to fundamentally consolidate the learning effect of students' theoretical knowledge and the training results of students' practical ability.

2.3 Facilitate students' access to and learning from advanced technologies and platforms

The course "C language programming" will involve some knowledge of advanced technology and advanced software system in the field of computer in the specific teaching. If the traditional teaching organization mode is used for a long time, it is not conducive to the timely and effective introduction of some more vivid, progressiveness and flexible technologies and platforms in the conventional course teaching. In the process of curriculum teaching reform, when the cultivation of students' innovative ability and innovative practical ability has become the focus of curriculum teaching, teachers need to introduce more progressiveness and flexible auxiliary tools to provide important support for the innovation and optimization of students' thinking ability and practical ability, so as to promote students to get a better experience in the process of practical learning. At the same time, after being exposed to advanced technologies and platforms, it can also expand students' curriculum learning horizons and make them have a more profound and full understanding of the practical value of computer major curriculum learning, which is also an important condition for ultimately guiding students to maintain their curriculum learning motivation.

3. Basic principles of teaching innovation reform in “C language programming”

The training of professionals and the development of related technologies are in a state of constant dynamic change. Therefore, the cultivation of students' innovative ability and innovative practice ability needs the support of various technical platforms and resources in practice. In order to improve students' learning effect and cultivate students' practical innovation ability based on this course, teachers and schools should first base on the actual needs of course teaching and the objective resource conditions of colleges and universities, understand the main paths for the application of practical teaching resources in the course of course teaching through reasonable planning and analysis, and combine the creative ability of the school's resource conditions, so as to gradually realize the innovation and optimization of practice teaching organization process. At the same time, in combination with specific curriculum teaching knowledge points, the school should also do a good job in the construction of practical learning platform and the organization and preparation of practical learning process in specific teaching courses, in order to give full play to the positive role of teaching reform and promote the improvement of teaching quality [2].

3.2 Paying attention to the cultivation and promotion of students' technical practice ability

Both the practical course teaching and the theoretical course teaching of program design require teachers to observe and understand the students' course learning status and learning results from the perspective of technical points and technical criticality. Especially for the course of program design, different students have certain differences in design thinking and the ability to master the basic knowledge of C language. Therefore, teachers need to popularize and explain to students in combination with the technical points and technical principles of program design, prepare for the dimension of basic knowledge for further innovation of teaching forms and methods, and avoid the lack of suitability and effectiveness of innovative teaching methods in practical application.

4.Path analysis of teaching reform and innovation of “C language programming”

4.1 To realize teaching reform and innovation by improving the course content system

The basic structure of “C language programming” design course is relatively fixed. In order to further achieve the effect of cultivating students' innovative ability and innovative thinking, teachers can improve and optimize the course content system by summarizing and analyzing the practical problems in students' theoretical knowledge learning and the specific obstacles in practice at the stage of fixing the course content to a certain extent. We can introduce some detailed school-based theoretical courses or practical courses aimed at the weak points of students' technical ability, so as to consolidate and optimize the students' curriculum learning effect. This in itself is also the innovation and improvement of the teaching content of fixed courses, which can bring more rich practical experience to students' course learning. For example, in the cumulative content learning of basic code memory and recognition in programming, teachers can help students start with basic computer programming elements and have a solid theoretical learning ability and effect by setting targeted code courses.

4.2 Through the application of innovative teaching methods, teaching reform and innovation can be realized

Innovative teaching guidance methods mainly mean that teachers should apply differentiated teaching organization forms and methods to organize and implement the specific teaching process in the practice of teaching guidance in combination with students' curriculum learning needs and differentiated basic learning ability. From the perspective of the teaching of “C language programming” discussed in this paper, innovative teaching methods can include cooperative exploration teaching mode and more practical flipped classroom teaching mode. Teachers can combine students' ability to master basic knowledge and encourage students to give full play to their subjective initiative in the learning process of core courses through problem guidance. By putting forward the practical problems encountered by individuals, we can use the flipped classroom or cooperative exploration to solve the practical problems of individual differences under the guidance of problems. In the specific process of educational guidance, teachers can help students solve theoretical obstacles and problems in course learning and provide some help for further guiding students to participate in practical learning as long as they carry out targeted guidance and education in combination with students' actual problems. In the implementation of specific teaching methods, teachers can set personalized programming requirements, let students complete programming tasks through cooperative exploration mode, and put forward personal questions and obstacles, so as to realize the innovation and optimization of teaching organization form.

4.3 Through the linkage of practical education bases, practical teaching reform and innovation

The cultivation of students' practical ability should not only simulate the construction of the corresponding practice base in the school, but also bring students into the practical environment for education and cultivation through the school enterprise cooperation or the linkage application of project teaching method. It is also a targeted scientific method. In the computer course teaching of college students, they can enter the real enterprise to participate in the program design under the background of specific projects, help students accumulate practical learning experience, and contact with more progressiveness core technologies and systems. Students' practical innovation thinking and practical innovation ability are bound to be improved.

Conclusion

Through the analysis of this paper, it can be seen that in the teaching of computer courses in colleges and universities, the innovation of the teaching form of “C language programming” needs to optimize the actual quality of course teaching

through the self-improvement of the course system, the increase of the proportion of practical teaching and the integration and application of diversified teaching organization methods, so as to finally achieve the purpose of improving the quality of professional personnel training.

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