Design and Implementation of Hierarchical Teaching in Computer Major in Colleges

Kai XING

Laiwu Vocational and Technical College, Jinan, Shandong 271100, China

renj1985@126.com

Keywords: Computer major in colleges, Hierarchical teaching, Design and implementation

Abstract: In the teaching process of computer major courses in colleges and universities, due to the strong theoretical and practical nature of the teaching courses, it is easy to lead to a large learning gap between students, resulting in great learning pressure for relatively poor students. In the long run, it will greatly reduce students' learning enthusiasm and interest, not conducive to the long-term progress of computer teaching. Therefore, the continuous integration of hierarchical teaching method breaks the traditional teaching methods, effectively solves the problems of students' differentiated development in the teaching process, helps students cultivate good learning interest and establish correct values, conducive to their later personalized and all-round development. This part briefly summarizes the hierarchical teaching method, effectively analyzes the hierarchical teaching design and implementation principles of college computer specialty, and puts forward effective hierarchical teaching measures, aiming to provide more teaching reference for college teaching in the future.

1. Introduction

Most college students are from all over the country through college entrance examination. Due to different geographical regions, there are certain differences in the teaching environment, cultural background and teaching level. Thus, there will be fundamental differences in the learning situation of college students in the later computer system teaching process. Moreover, due to the strong comprehensiveness of all teaching subjects involved in the computer professional curriculum, there is a big gap in the learning level among college students. The hierarchical teaching is introduced into the computer professional curriculum teaching. The hierarchical teaching design and implementation can play a good supporting role in realizing the personalized and comprehensive development of education and teaching, provide more and better high-quality and compound technical talents for the progress of national and social forms.

2. Meaning of Hierarchical Teaching

Hierarchical teaching is a targeted teaching method which takes students as the subject, combines with teaching objectives, students' actual learning situation, their own characteristics and

Copyright © (2021) Francis Academic Press, UK DOI: 10.25236/isaete.2021.033

learning interests. It is different from the previous teaching methods. The hierarchical teaching method should respect the teaching differences of students in each region from the actual teaching practice, and formulate different teaching plans and implementation plans according to their actual learning situation and purpose, so as to achieve unexpected teaching effect and ensure the teaching quality. In recent years, hierarchical teaching has been widely used in the computer system teaching in colleges and universities. It is helpful to improve the students' learning enthusiasm and interest, and enhance the teaching level of computer major course by using the teaching methods of in-class stratification and cross-class stratification. In addition, hierarchical teaching is a new teaching mode at present, and it is also the key research object of teaching staff and subjects in colleges and universities [1].

3. Analysis on the Current Teaching Situation of Basic Application of Computer Specialty in Colleges

In the teaching process of basic courses of computer specialty in most colleges and universities, *Computer Application Technology* is used as the unified teaching material for teaching. Students in a whole class accept unified teaching, teaching objectives, teaching processes and teaching materials, pay too much attention to teaching progress and rely too much on syllabus, ignoring the differences between students. Such teaching methods are not only inconsistent with students' major, but even ignore the different levels of students' learning ability, resulting in great gap between teaching quality and expected teaching results. For students with relatively poor computer foundation, learning ability and acceptance ability, influenced by various factors, their achievement level has not been significantly improved and developed. The current teaching mode is more in line with students with strong acceptance ability, learning ability and computer foundation. The teaching needs of students with poor comprehensive ability are not met, and their learning ability and skills have not been well improved. Over time, they will gradually lose interest and enthusiasm in learning, and even have a psychological feeling of boredom with computer course teaching, which is what modern teaching situation does not want to see. Therefore, relevant education departments and teachers must improve the optimization and innovation of teaching methods.

4. Basic Teaching Basis for Hierarchical Teaching Design and Implementation

The basic teaching basis of hierarchical teaching design and implementation mainly starts from three aspects.

4.1 Comprehensive Teaching Concept

Since the teaching of computer courses in universities, the core goal of domestic computer teaching has always been to improve the comprehensive quality of college students as much as possible. It will carry out quality education for all college students and strive to make every member develop in a comprehensive and harmonious direction. Therefore, the integration of hierarchical teaching does not mean the implementation of elimination teaching for students. For students at different teaching levels, hierarchical teaching can be carried out according to their actual learning situation, and a learning outline suitable for their own characteristics, actual learning situation and teaching level can be formulated for each student, so that students at different levels can get the maximum teaching effect from daily teaching. Therefore, it is very necessary to develop comprehensive hierarchical teaching for college students.

4.2 Follow the Principle of Subjectivity

Under the new curriculum reform, with the continuous deepening of teaching reform, students' subjectivity has been brought into full play, and more and more people have recognized and paid attention to the teaching of computer specialty in colleges. Teachers, as important organizational personnel, should give full play to their guiding role and the main role of students at different levels, and divide them into different levels according to learning interest and characteristics, so that teachers can design and implement teaching schemes at different levels. Hierarchical teaching guide and training can continuously improve students' learning interest and practical learning interest, and promote the comprehensive improvement of students' professional learning ability [2].

4.3 Group Teaching Principle to Enhance Students' Sense of Cooperation

In the teaching process of computer major, teachers can develop group teaching based on the hierarchical teaching of computer major college students. There are both students with strong comprehensive learning ability and students with average or poor comprehensive learning ability in each group. Through the form of group, learning complementation can be realized. This way is not only helpful to enhance the communication between students and improve the relationship between students, but also helpful to enhance the collective cohesion of college computer major curriculum teaching and promote the benign development of computer major curriculum.

5. Specific Scheme of Hierarchical Teaching Design and Implementation of College Computer Specialty

The specific scheme for the design and implementation of hierarchical teaching of college computer specialty mainly includes three aspects.

5.1 Teaching Design

According to the analysis on the teaching of computer courses in some colleges, there are great differences among students of computer major in terms of learning ability, basic knowledge and learning interest. If schools and teachers want to achieve the all-round development and improvement of all students' comprehensive ability, they can only carry out hierarchical teaching for students at different levels, clarify the relevant teaching objectives, methods and resources.

5.2 Stratification for Students At Different Teaching Levels

College students come from all regions of the country. Due to the influence of local environment, local teaching level or other factors, there are obvious differences in each student's basic learning level and comprehensive learning ability. Before the basic knowledge teaching of computer major, in order to fully understand and grasp the basic learning situation of students, a comprehensive test of the advanced nature can be carried out before the course is launched. Through the test results and students' self-evaluation, teachers have a general understanding of the basic computer learning level, knowledge and skills of students, so that teachers can develop targeted hierarchical teaching for students at different teaching levels, and carry out phased and confidential hierarchical curriculum teaching of different modules according to students' learning interests and abilities in the teaching of *Fundamentals of Computer Application*, so as to effectively enhance students' comprehensive learning ability and basic learning level.

5.3 Hierarchical Design for Different Teaching Objectives

The first is hierarchical teaching with different teaching objectives. The course of college computer specialty is also divided into different professional posts for professional teaching. Teachers can formulate targeted teaching scheme design according to the choice of each student's different professional teaching objectives. For example, for college students majoring in e-commerce involved in the teaching of computer specialty, their ability goal orientation focuses more on the processing of e-commerce pictures and the graphic design of online store interface, and they are not interested in the knowledge of software and hardware inside the computer. Students majoring in software and hardware focus more on the design of mobile UI and the overall effect of web interface design. Different goals will lead to different learning interests and abilities. Therefore, teachers should formulate teaching plans of different levels according to students' actual situation.

The second is hierarchical teaching for teaching objectives with the same major and different learning ability. In the teaching of the same major courses, students will have high, medium and low levels, and their learning ability and mastery of basic knowledge will be different. Therefore, teachers can carry out hierarchical teaching according to the students' learning ability level, divide into several levels in detail, and then formulate different learning plans according to different learning characteristics to implement targeted teaching, so as to promote the comprehensive improvement of their learning ability [3].

In the process of implementing the specific design scheme, teachers need to present three different levels of learning ability objectives, which are specifically displayed in the form of blackboard, so that each student can fully understand their current comprehensive learning situation, clarify their specific level objectives, and give full play to their learning enthusiasm and initiative.

6. Conclusion

To sum up, according to the content analysis of the above, the teaching content of college computer specialty is strongly theoretical and practical. In the design and implementation of hierarchical teaching, teachers should carry out targeted hierarchical teaching according to students' actual learning situation and comprehensive ability level, rely on teaching principles, learning objectives, learning objects and other contents to divide and design teaching levels, fully reflect the flexibility and standardization of hierarchical teaching, so as to further enhance the teaching quality and teaching effect of computer specialty in colleges.

References

[1] Sun Hongsheng. Hierarchical Teaching Design and Implementation of College Computer Specialty. East China Paper Industry, vol.51, no.03, pp.55-57, 2021.

[2] Deng Manying. Hierarchical Teaching Design and Implementation of Fundamentals of Computer Application in Higher Vocational Colleges -- Taking the Administrative Class of Fashion Design Specialty as An Example. Computer Knowledge and Technology, vol.13, no.36, pp.140-142, 2017.

[3] Deng Manying. Research on Fundamentals of Computer Application in Higher Vocational Colleges and Classroom Strategy of Implementing Hierarchical Teaching by Integrating Fashion Design Specialty. Computer Knowledge and Technology, vol.13, no.21, pp.154-155 + 161, 2017.