

Study on Computer Network Course Teaching under the Background of New Engineering

Yiting Jiang

School of Information Science and Technology, Yunnan Normal University, Kunming, Yunnan, 650500, China

jean_kid@163.com

Keywords: New engineering, Computer network, Teaching research

Abstract: Computer network course teaching is a significant subject in computer system teaching, but according to the research and analysis of the current computer network teaching course, it is found that its teaching effect is not ideal. There is still a big distance from the set teaching objectives, and there are some problems haven't been solved in teaching methods and practical application, affecting the teaching effect. This paper analyzes some problems existing in the teaching of computer network course under the background of new engineering, and based on the cultivation of innovative talents, puts forward corresponding optimization measures in its teaching content and practical application, for reference.

1. Introduction

With the continuous progress of information technology, computer network technology has been widely used in people's production and life. Computer network course teaching has been incorporated into the daily course teaching, and it occupies a very significant position in the teaching of computer specialty and network engineering system specialty. The main teaching content of the course is based on the hierarchical model of computer network, and the working principle of computer network is studied in detail, including much theoretical knowledge. The traditional teaching method of computer network course is fixed, single and the practical teaching method is too simple. These shortcomings put forward higher challenges to the teaching effect of computer network course and the cultivation of innovative talents under the background of new engineering. Therefore, how to further optimize the teaching level of computer network course and improve students' comprehensive application ability and innovation ability has become an urgent problem to be solved by relevant education departments at this stage, and it is also the main development direction of computer network course teaching.

2. Current Teaching Status of Computer Network Course

At present, the current teaching status of computer network course mainly includes the lack of innovation in teaching methods, the emphasis on theory and backward assessment methods, specifically as follows.

2.1 Too Fixed and Single Teaching Method

During computer network teaching, teachers still use the traditional cramming teaching method, taking teachers as the main body and ignoring the main role of students, so that students learn passively. The fixed and single teaching mode also reduces the students' interest in learning, even makes the students produce psychological emotions, such as boredom, not conducive to the normal progress of computer network teaching. With the continuous change of the times, colleges and universities have strengthened the teaching of computer network courses based on the network technology and information technology. How to change the traditional education mode and give full play to the students' subjectivity is a crucial point for schools and teachers to study^[1].

2.2 Strong Theoretical Teaching of Computer Network Course

According to the research of professional scholars on the teaching of computer network course, it is found that the teaching content of computer network course is too complex and logical, leading to the extension of teaching time. Because the teaching content involves too much teaching knowledge, and it has higher requirements for the manual dexterity and practical operation skills, the students are not clear about the teaching knowledge and can't master the practical operation skills, which leads to the reduction of students' interest in computer network teaching and the enthusiasm of learning, thus affecting the overall teaching quality of computer network course.

2.3 Too Backward Assessment Method

The traditional assessment form is mainly written examination, focusing on the evaluation of theoretical knowledge and the mastery of the basic knowledge of computer network, and ignoring the teaching of students' practical courses. As a result, students can't fully master the skills of computer network application, and use them flexibly in real life and future work, lacking timeliness and practicality^[2].

3. Teaching Reform of Computer Network Course under the Background of New Engineering

Based on the characteristics of computer network course, such as high difficulty, complex teaching structure and wide range of subjects, combined with the action goal of new engineering construction, the knowledge system, teaching mode and training mode of computer network teaching are replanned and adjusted to better promote the teaching quality and effect of computer network course, train more excellent innovative talents, so as to better meet the current social needs of talent training and student education needs. To break the influence of traditional teaching ideas on the teaching content of computer network course, the specific reform methods mainly aim at the following aspects. First, innovate the teaching practice link, focus on the close relationship between the practical teaching content and the operation ability of the actual work of computer network. Second, promote and optimize the teaching methods, focus on increasing the participation rate of students in the computer network course teaching, and pay attention to the diversified progress of teaching methods. Third, promote the teaching quality, fully link the internal link between the achievement rate of teaching objectives and assessment methods, promote the teaching content, focus on the promotion of professional theoretical knowledge and technical ability.

4. Practical Reform Measures of Computer Network Course Teaching under the Background of New Engineering

Through the summary of the above content, this paper mainly optimizes and perfects the teaching of computer network course from three aspects: innovating practice teaching, improving teaching methods, and promoting teaching quality.

4.1 Innovate Practice Teaching

Firstly, it is a must to change the traditional single and fixed teaching mode, and create a new teaching situation mode combined with students' own features and teaching objectives, so as to create a good atmosphere for students, stimulate students' interest in learning and mobilize their enthusiasm. Secondly, based on the big data platform, we can innovate the teaching mode, adopt the hybrid online and offline teaching method to realize the perfection and innovation of the teaching content system, enrich the students' teaching resources and promote their practical ability. Finally, we can focus on the organic combination of practical ability and theoretical knowledge, do a good job in after-school practice, effectively use network technology and information technology, promote students' further understanding and control of computer network teaching knowledge through continuous skill practice, and then flexibly apply it to real life and work^[3].

4.2 Diversify Develop Teaching Mode

4.2.1 Build Resource Sharing Platform

Based on the big data platform, the network teaching resources can be integrated to realize the real-time sharing of teaching resources. At the same time, as educational guides, teachers can also show their accumulated teaching experience and collected teaching plans, syllabus, analysis of key and difficult problems in the form of video or PPT, so as to realize the sharing of network information resources, help students to establish correct ideas, stimulate their enthusiasm and autonomy in learning. In addition, teachers can use WeChat, QQ and other social software to share and transfer teaching resources in group chat or official account.

4.2.2 Evaluate after-Class Homework Each Other

In the teaching of computer network course, teachers can use the auxiliary teaching platform to assign relevant homework to students, so as to realize the consolidation and extension of classroom teaching. Teachers should set the time for students to finish their homework after class, and set the automatic correction of objective exercises. For subjective questions, students are encouraged to make interactive evaluation and discussion, so as to deepen the understanding and mastery of key and difficult knowledge. Compared with the effect of teachers' independent homework correction, students' mutual evaluation is more effective, which can improve students' attention to wrong points. This way is not only conducive to the progress of students' personal performance, but also conducive to the progress of the whole class. It can train their logical thinking and thinking memory. Through the continuous practice of knowledge content after class, students can master more theoretical knowledge and practical skills, and perfect their learning and flexible use of knowledge points.

4.3 Promote Teaching Quality

The main role of students in the teaching of computer network course should be fully exerted. Combined with the guidance of teachers, it is a must to train students' interest in learning, initiative and innovation consciousness, increase the participation rate of the course, and select the content of the course according to the actual situation of students, so as to effectively promote the teaching quality and effect. On the one hand, teachers should help students to train good learning interest and self-study ability, let students actively participate in the teaching of computer network courses, continuously attempt to select the learning methods that conform to their own characteristics from many learning methods, promote their own overall progress of personality, which has a positive impact on promoting the teaching quality. On the other hand, high school graduates have just separated from the closed teaching methods in the middle school stage, and have not fully adapted to the learning habits and life habits of the university. They still rely on the teaching content and teaching mode arranged, and do not realize the significance of autonomous learning. As a result, students do not establish the determined teaching objectives, affecting the teaching quality^[4].

Therefore, continuously training and promoting students' autonomous learning ability and enthusiasm is significant to promote the teaching quality. Firstly, according to the learning objectives and requirements of different students, teachers should set up learning plans in line with their own learning habits to help students realize their actual needs and establish correct values. Secondly, they can guide students to develop good living habits and learning habits, train their awareness of autonomous learning and innovation, help them make their own personalized learning plan, which has a positive role in promoting the teaching level of computer network course.

In addition, schools and teachers should also focus on the reform of the course examination method, no longer excessively focus on the detection of theoretical knowledge teaching level, but emphasize on students' practical ability, so as to realize the overall evaluation of theoretical knowledge and practical content. Teachers should relate the practical teaching content to the future work content and test the students' practical skills and professional technical ability on the basis of clear teaching objectives.

5. Conclusion

In short, through the research of computer network course under the background of new engineering, we can see that the reform and innovation of computer network course teaching is a significant condition to achieve the purpose of new engineering construction. With the continuous progress of network and information technology, to keep up with the pace of social progress and meet the needs of current social talent training, relevant colleges must focus on the training and innovation of students' modern technical ability, promote the quality of teaching, and reform the teaching system and content, so as to meet the training needs of innovative talents in national form, and promote the coordinated progress of talent strategy and social economy.

References

- [1] Han Lijuan, Sun Yuhong. Teaching Practice and Research of Development Courses of Computer Major under the Background of New Engineering [J]. Computer Knowledge and Technology, vol.17, no.09, pp.106-107 + 112, 2021.
- [2] Dong Baolan, Li Jiansen. Teaching Reform of Computer Network Course under the Concept of New Engineering [J]. Computer Knowledge and Technology, vol.17, no.08, pp.111-113, 2021.
- [3] Wang Zhimin, Liu Yunxiang. Multi-level Hierarchical Teaching Mode of Computer Basic Course under the Background of New Engineering [J]. Office Automation, vol.26, no.01, pp.10-12, 2021.
- [4] Wu Lian, Xiang Li, Cui Zhongwei, Wang Qingqing. Teaching Reform of Computer Network Course under the Background of New Engineering [J]. Computer Knowledge and Technology, vol.16, no.35, pp.157-158, 2020.