Ideological and Political Teaching Reform of Computer Network Course Based on Thinking Innovation

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Abstract. With the continuous development of computer technology, in the teaching of computer network courses, colleges and universities must constantly change the way of thinking, actively use scientific thinking and innovative ways, update the teaching content of computer network courses, continuously improve the relevant teaching system and break through the traditional Teaching restrictions. The purpose of this article is to study the reform direction and research direction of ideological and political teaching of computer network courses under innovative ideas. This article takes computer science students from the Polytechnic University as the research object, and conducts investigation and research on the basis of relevant practical ideological and political teaching background and theory. The reform method and strategy of ideological and political teaching in computer network courses, on this basis, put forward the reform path and development direction of ideological and political teaching in network courses. The experimental results show that in the era of "mass entrepreneurship and large-scale innovation", it is necessary to reform the teaching content and methods of computer network courses on the basis of cultivating students' innovative practical ability, in order to achieve a seamless connection between the two and integrate ideology and politics Under the computer network teaching model.

Keywords: Thinking innovation, Computer network courses, Ideological and political teaching, Computer network teaching reform

1. Introduction
The computer network course is an important basic course, whether in theory or in practice. Through the study of this course, students are required to understand the concept and working mechanism of computer network system, have the ability of network management, network maintenance and network construction, and lay the foundation technology and other courses for the subsequent research of "network security network". After graduation, students can engage in systems management, network management, network cabling, pre-sales and after-sales services, network testing and other positions, and will develop towards network administrators, assistant engineers, network engineers and senior engineers.

The "Curriculum Ideology" of computer network is not equivalent to the Ideology course. Professional teachers may think that Ideology education is the task of the Ideology teacher, and they
do not pay enough attention in thinking\textsuperscript{[4]}. At the 2019 National Education Conference, General Secretary Xi proposed that college teachers must clarify several questions, "what kind of people to cultivate, what kind of people to cultivate, and for whom" is to cultivate morality, intellect, body and beauty And full-time development of professionals\textsuperscript{[5]}. Full-time teachers only teach professional knowledge in the classroom, while ideological and political teachers only talk about theoretical knowledge of ideological and political education\textsuperscript{[6]}. With the passage of time, students think that ideological and political education is boring content, which is not conducive to the comprehensive development of college students. As a science course, the computer network course has a strong logical point of knowledge. Teachers are reluctant to intersect and explain ideological and political knowledge, or some teachers explain and complete the course before each class or at a fixed time. Irrelevant elements of ideology and politics, taking classroom ideology and politics as a burden of professional lectures, students have no sense of identity, feel that the elements of ideology and politics are abrupt, and the effect is not good\textsuperscript{[7-8]}.

On the one hand, it is necessary to achieve "ideological ice-breaking" to make full-time teachers aware of the importance of ideological and political lessons, rather than occupying the time of professional knowledge, but to stimulate students' interest in learning courses. The teacher's responsibility is to teach and educate people. Teaching and educating people are equally important\textsuperscript{[9]}. Teachers of professional courses should play an active role in ideological and political practice, and dig deeply into the ideological and political elements in professional courses with a "learning" attitude to enhance students' recognition of the courses in the profession\textsuperscript{[10]}.

2. Method

2.1. Real-time analysis of students' concerns and dynamic adjustment of course content

In traditional ideological and political teaching, the content often focuses on theoretical knowledge, without too much innovation, and lacks appeal to students. The purpose of "Course Thinking" is to guide students to form correct outlook on life and values while learning professional knowledge and skills. The hot issues that students pay attention to are generally those that are reflected in a certain online hot event. This kind of hot event can usually spread quickly on the Internet, and can cause a large number of Internet users to participate in the discussion of this event in a very short time. Improving the ideological and political consciousness and ability of professional teachers In order to realize the effective integration of computer network teaching and "curriculum ideology and politics", it is very important to improve the ideological and political consciousness and ideological and political ability of computer network teachers. In the computer network professional teaching classroom, consciously help students to effectively understand and support the theoretical system of socialism with Chinese characteristics.

2.2. Scientific thinking to meet multi-level needs

Because students have different interests or points of interest in the same course, they will show different learning effects. Multi-level teaching is to give full play to the scientific way of thinking, satisfy students at different levels or carry out targeted teaching according to the students' different interests, and truly realize the targeted teaching of computer network courses. At the same time, this multi-level teaching system can also be extended to different education colleges and entire higher education teaching.

2.3. Teaching methods adopted

In the teaching process, a variety of teaching methods should be adopted to gradually penetrate the ethical standards and rich technical values of network applications, so that students can understand the close connection between the network and human society and daily life, advocate network moral self-discipline, and develop a good use of the network Habit, recognize the value of the network, correctly understand the network, the relationship between the application of network technology and
society, improve information literacy, and form dialectical materialism. The teaching methods that can be used are: case-driven teaching, flipping classrooms, course website construction, examination and evaluation. Scores for ideological and political discussions and thought summaries are added to the process evaluation.

3. Experiment

3.1. Experimental subjects
This article selects 80 students majoring in computer science from the University of Science and Technology to teach computer network courses. It is divided into two classes on average: traditional class (N=40), experimental class (N=40), and different teaching methods are used. The traditional class uses the original computer network course teaching integrated into ideology and politics. The experimental class adopts the teaching method after adding the innovative mode of thinking. In order to understand the recognition and adaptation of this new teaching model after the students implement the activity teaching in the course, the questionnaire method of the two classes was surveyed to collect statistics and analysis information.

3.2. Experimental design
In order to understand the students' recognition and adaptation to this new teaching model after the activities of the curriculum are implemented. After conducting the staged teaching, we conducted a survey on the experiment, using a questionnaire for students in the two classes on the "Computer Network Thinking and Politics Course under Innovative Thinking", a total of 80 questionnaires were distributed, and 78 of them were valid There are 77 questionnaires. Not only did the questionnaire survey be conducted after the staged teaching, but also the students' usual classroom performance and the students' final exam results were compared with the teaching results of the two classes, and the reform methods were studied.

4. Results

4.1. Degree of interest in courses under the mode of thinking innovation

| Degree Class   | Interested | generally | good | not interested |
|----------------|------------|-----------|------|----------------|
| Experimental class | 38         | 2         | 0    | 0              |
| proportion     | 95%        | 5%        | 0%   | 0%             |
| Control class  | 24         | 12        | 2    | 2              |
| proportion     | 60%        | 30%       | 5%   | 5%             |

As shown in Table 1, after a stage of experimentation, the students in the experimental class showed a strong interest in learning this course, and the number of people who were very interested and interested had greatly increased. This shows that the use of activity teaching in this course enhances the students' enthusiasm and interest in learning computer network knowledge, and at the same time fully reflects the student-centered teaching idea of this activity promoting development. In the process of completing various learning activities carefully designed by the teacher one by one, students have greatly mobilized the students' internal learning motivation, and it also shows that activity teaching has a higher advantage than traditional teaching in increasing students' interest in learning. From the perspective of the student's overall development in the future, it also plays an active role.

4.2. Examination results under the thinking innovation model
Figure 1. Statistical results of examination papers in the experimental class

As shown in Figure 1 and Figure 2, after a period of teaching implementation, the traditional class and the experimental class are evaluated in the form of test questions. The test questions include two aspects of the fourth activity teaching implementation research content. The first part is about the basic theoretical knowledge of computer networks, and the second part is about the practical skills of computer networks. Among them, basic knowledge of computer network accounts for 60% of the total score, and knowledge of practical skills of computer network accounts for 40% of the total score. The total score of the two parts is 100 points. After the exam, the author conducted a comparative statistical analysis of the exam results of the two classes. The specific operation is to use a bar chart to score the basic theoretical knowledge of each student's computer network and the actual knowledge of computer network operation skills. Statistics separately.

4.3. Relationships to be dealt with in the teaching of computer network courses

First, the relationship between new technologies and computer network technologies is developing at an alarming rate. In the face of constantly updating and developing new technologies and knowledge, how to cultivate a scientific way of thinking is very important for students. Therefore, in this process, students should be trained to be familiar with the working principle of the network, and follow and learn by themselves. Now, learning methods are becoming more and more important for students, as are online courses. Using network courses can not only learn the basic principles of the network, but also learn and summarize, and constantly learn the ability of new technologies, so as to understand the design ideas of the network. In this process, if students can learn the basic methods of the network, they can make full use of previous learning results.

Carrying out ideological and political education is conducive to cultivating students' scientific world outlook, outlook on life, and values that meet the requirements of social evaluation. These ideological concepts will affect students' various behaviors in their own development process. Under the guidance of the correct and scientific three views, people's behavior will be more in line with the
requirements of social evaluation, and their behavior will be consistent with national interests, national interests, and social interests. If an incorrect ideology is established, it will make your behavior contrary to the interests of the entire country and nation, and will eventually hinder your own development. Comparing with other major students, whether the computer major has the correct and scientific views, its influence is more extensive. Now that both the Internet and computers are very popular, people use related software in their daily production and life, and these computer software are developed and maintained by computer majors. During their development, their ideas will be unconsciously affect the design and development of software, which will affect more software users. Therefore, the ideological and political education for computer majors in vocational colleges has its special significance and value.

4.4. Computer network teaching method integrating ideological and political teaching and thinking innovation
In view of the contradiction between the ideological and political education reform of the computer network course and the lack of ideological and political penetration in the current course, the contradiction between the huge knowledge system and the limited class hours, and the rapid development of the computer network course. The development of network technology and the slow update of teaching materials, the contradiction between the tediousness of traditional teaching methods and the students' demand for new teaching methods, the teaching of computer network courses is based on the integration of multiple models. Multiple integration of ideological and political education teaching knowledge. To enable them to participate in social activities on the Internet and realize that the ideological education in the process of ideological and political theory is based on the importance of mainstream values for their suffering, situation, historical mission and responsibility awareness education, so that college students can accept the communication to them Ideological and theoretical education.

4.5. The significance and results of the integration of computer network course teaching and "course thinking"
With the advent of the era of big data, people's study, life, and thinking have undergone tremendous changes. Not only can people use Internet technology, through Weibo, WeChat and other social tools and major search engines, to quickly and easily obtain the information they want, expand their personal relationships, but also make communication more convenient and the expression of ideas more real. But big data is also a double-edged sword, and it is easy to cause students with immature values to have a low sense of social responsibility and not have enough restrictions on moral constraints. With the increase in the utilization rate of high and new technologies, the abnormal crime-oriented public opinion such as the rate of cybercrime and network communication has gradually deepened, which will make students feel uneasy and frightened. When this network of negative energy accumulates to a certain amount, the quantitative change produces qualitative change, which may affect the students' real life, such as social fear, mental depression, etc. For the computer network students, because of the professional reasons, they are more impacted by these, the network security awareness needs to be carried out to the end, which requires teachers to be in the process of teaching.

5. Conclusion
This article takes the computer network course as an example, and proposes a teaching mode in which the university computer network course is integrated with ideological and political elements, and fully exerts the main teaching role. Combining ideological and political teaching with computer network course teaching, moral education and intellectual education Combining people to complement each other. Computer network teachers must always pay attention to students' ideological dynamics, improve their ideological and political consciousness and ability, deeply understand the significance and necessity of the integration of professional teaching and "curriculum ideology and politics", and
actively explore and explore the ideological and political elements in the computational network major courses. Incorporate "ideological and political education" into the classroom teaching, truly realize the organic integration of computer network professional teaching and "curriculum ideological and political education", and truly achieve "standing morality". The breadth and height of the knowledge intake of computer network courses have been expanded, and students' ideal beliefs have been cultivated. Not only the spirit of the craftsman who strives for excellence, but also the responsibility and mission on his shoulders. Actively study and contribute to the prosperity of the country and national rejuvenation.

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