Exploration of Teaching Reform of Computer Network Practice Course

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Abstract: With the vigorous development of digital and network technology in China, computer and its technology have been widely used in various industries. Therefore, information technology has become increasingly important in today's society. However, there are still many shortcomings in computer teaching in China, and reforms and improvements are urgently needed to give full play to the important role of computer technology. The research focuses on the following reforms of computer network practice course teaching reform.

1. Introduction
The computer in our country has been widely used in people’s work and daily life. With the rapid development of computer technology, the traditional computer teaching is not effective enough to meet the needs of social development. Based on the social environment of computer development, the application of information technology in the computer public course teaching can replan the course content, improve the teaching mode and collect students' teaching evaluation to improve teaching effect. Computer course is an important public course in colleges and universities, which is directly related to the future employment of students. In view of the current situation of the development of computer public courses in China, there are still some problems, such as single content, low quality, lagging mode, slow information feedback and so on, which delay the course teaching reform.

2. Current situation analysis of computer teaching process
(1) The lack of students’ practical ability
Computer courses are obviously comprehensive and involve a wide range of knowledge with a strong professionalism in electronics, communication, mathematics, etc. Students are prone to “feel confusion” in their studies due to the poor continuity between knowledge, and various problems with low levels of internalization, therefore, the learning results are not ideal.

Practical operation is an important part of computer teaching. Only by combining the theoretical knowledge in books with practical operation can students better understand and master. However, due to the influence of traditional exam-oriented education, the cultivation of students’ practical ability is neglected [1]. In addition, the students themselves did not correctly understand the importance of computer practice courses, instead wasting time by playing games, which can not improve their own computer course learning level and quality, and is not conducive to the grasp of computer content and operating.
(2) The lack of advancement in textbooks
With the continuous deepening of information technology, the pace of updating computer software is also accelerating. However, the computer teaching textbooks used by most colleges and universities in China are still outdated, which is difficult to meet the needs of the development of the times. Therefore, under the old teaching version, it is difficult for students to apply what they have learned and keep up with the times, as well as highlighting the effectiveness of computer teaching[2].

Computer public course is a course closely connected with information technology. However, with more theoretical knowledge and less practical links, there is no obvious difference between the teaching of computer public course and other professional knowledge subjects. Teachers still adopt the traditional teaching mode, which seriously hinders the independent learning. In the one-way teaching mode, students’ learning information is not received in a timely manner, which weakens the connection between teachers and students. Students are not motivated to study, so their interest is also weakening with poor classroom performance. Especially in the big data mode, more emphasis is placed on innovative teaching, information sharing and learning, as well as independent knowledge exploration. Obviously, backward teaching modes can no longer meet the needs of the development of new education.

(3) The individual differences of students are ignored.
Due to the individual’s age, gender, personality, intellectual and non-intellectual factors, there are certain differences in students’ grasp of computer knowledge and skills. However, students and teachers lack communication in classroom information, and the classroom teaching evaluation system lacks systematic and various features. Students cannot express their learning problems in public courses in a timely manner, and teachers cannot make targeted adjustments with insufficient feedback on teaching and learning based on student learning. Teachers do not pay attention to the individual differences of students may result in uneven computer skills of students[3].

3. The necessity of practice course teaching reform of computer network
With the vigorous development of digital and network technology, China has entered the era of Internet +. The theme of the era of information technology development promotes social science and technology, strengthens the sharing of information between Internet data. Based on the big data environment, the education industry has ushered in new development opportunities and changed the traditional teaching mode and enriched classroom teaching, as well as increasing inter-connectivity among students, teachers, and classroom information. As early as 2015, Premier Li Keqiang proposed to expand Internet business to organically integrate the Internet, cloud computing, big data, and various modern manufacturing industries. Therefore, the concept of Internet + should be “Internet Modern industries” [4]. Therefore, the economic development trend that China is facing should be the mode of Internet +.

With the development of the Internet, computer teaching has been enriched, and the teaching forms have also become diversified. For example, products from the Internet + era have been widely used in computer teaching as a new type of resources, such as micro-classes or MOOC classes. The limitations of traditional classroom time and place are broken. Students can use smart phones or other smart mobile devices anytime and anywhere to watch teaching videos on the Internet, which is conducive to the consolidation of students’ knowledge. Under the teaching reform of computer network, countless gathered in the network makes every student can enjoy the common teaching resources. The reform can break through the geographica limitations of school age to realize the equality and dig their own potential and provide computer teaching results. The reform of computer network teaching has promoted the transformation of traditional instilled teaching into a mode that takes students as the mainstay and respects the development of students’ individuality, and enables students to make full use of the Internet to improve their own level of practical operation, which is conducive to students’ future development[6].
4. Analysis on the teaching reform method of practice course of computer network

(1) Improving students’ practical operation

Computer teachers should change teaching idea, pay attention to students’ practical ability in the teaching process. Taking the teaching content as the guiding theory, teachers should focus on students’ ability in computer operation and the theory of knowledge and redistribute computer operation time. The theoretical knowledge time should account for a third of the total teaching hours. Students computer operation time should account for two-thirds to make students master more skilled operation. For example, in the basic operation of file processing, the teacher can prepare a copy first to make students create a new document and enter for training student’s fingering and typing speed. This can make students follow to exercise both the practical ability and the initiative thinking as well as problem solving ability[7].

(2) Adopting diversified teaching methods and stimulating students’ interest in learning

Einstein once said, “interest is the best teacher.” Only computer teachers fully stimulate students’ interest and enthusiasm, can students actively participate in teaching, which is helpful to improve the quality of classroom teaching. For example, when students enter the society, the interview brings about the problem of finding a job. Most companies or enterprises require students to show their resumes first[8].

![Multiple teaching methods](image1)

Fig. 1 Multiple teaching methods

Computer teaching based on “Internet +” should keep pace with the times to improve backward textbooks and increase advanced teaching content, as well as combining students’ psychological characteristics to adapt to the needs of the times. For example, most students like to socialize online, and with the help of mobile smart devices, they can have online entertainment anytime and anywhere. Computer teachers can make full use of students’ interest for students to select social software, such as QQ, WeChat, Weibo, Tieba. Teachers can teach students how to use and create a simple application or build a simple SaaS through WeChat public social networking sites. In this way, students cannot only satisfy their psychological curiosity, but also improve the application of knowledge and adapt to the needs of the times. In addition, teachers can also adopt the teaching form of “micro-class” to impart the key points and difficulties to students through micro-class and micro-video, so as to strengthen students’ grasp of knowledge and improve the efficiency and quality of computer teaching, as shown in figure 1.

(3) Combining individual differences of students, using targeted teaching methods

If teachers need to refer to professional knowledge in the home teaching process, they can connect the professional courses with the main line to achieve a seamless connection of professional knowledge and weaken the students’ sense of separation of professional knowledge. In order to improve the effectiveness of computer classroom teaching, computer teachers should pay full attention...
to the individual differences of students and adopt different teaching methods. For example, based on
the psychological characteristics of students who like to play and joke, teachers can teach students to
use “Photoshop” to make interesting pictures. At the same time, the method of layered teaching is used
to carry out targeted teaching for students.

Teachers divide students into the following different levels. The students with strong cognitive
ability and high level of computer operation are high-level students; students with intermediate
cognitive skills and computer skills are at a medium level. Students with poor cognitive and computer
skills are on average. In the teaching process of “Photoshop”, teachers should pay attention to the
operation and use of software tools for ordinary students. When students can master the various
functions of the software, teachers should encourage them. For middle-level students, teachers not
only need software tools, mastery and task requirements, they can also use classroom teaching
software to count the number of times students answer questions and collect students feedback. In this
process, students should be involved to meet the learning needs of students, scientifically construct
and reform computer classrooms, check student learning progress, achieve teaching progress and
evaluation, and let teachers and students think and work together.

5. Conclusion
In short, with the widespread popularity of computers and the rapid development of the Internet, it is
imperative to improve the effectiveness of computer teaching. Based on this, computer teachers should
change their teaching concepts, combine students’ psychological characteristics and social
development needs, and adopt a variety of teaching methods to fully stimulate students’ learning
interest, improve the quality and level of teaching, and strengthen students’ practical ability to promote
the development and progress of computer teaching in China.

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