# Reform of College Computer Basic Curriculum in the "Internet Plus" Teaching Mode

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**Abstract:** The rise of "Internet plus" has greatly promoted the deep integration of the Internet and various industries, especially "Internet plus education" has become a hot topic in the current education field. This research discusses how to apply the "Internet plus" element to the teaching of basic computer courses in colleges and universities, aiming at improving students' computer application ability and cultivating computing thinking. The following aspects are discussed in this research:

**Keywords:** Internet plus Education; Teaching Mode; Leading Role

## Introduction:

Today, people's work, study and life have been closely combined with the Internet. The widespread use of personal computers, laptops and smart phones has brought us into the "Internet plus" era. This concept has been widely used in various fields and has quickly attracted people's attention, especially the concept of "Internet plus education". "Fundamentals of College Computer Science" is a core course in the undergraduate program of non-computer majors in ordinary universities. Its aim is to enhance students' computer application skills and computational abilities, and to lay a solid foundation for their future studies in other subjects. Meanwhile, with the popularization of the Internet, there is an increasing number of network-based software. Therefore, in the context of informatization, how to reform the teaching of computer fundamentals and how to apply the "Internet plus" concept have become important topics in current computer theory courses.

## 1. Problems in the Teaching Process of College Computer Fundamentals

### 1.1 Issue of significant differences in students' learning foundations

In recent years, China has introduced information technology courses in primary and secondary schools during the compulsory education stage. According to incomplete data statistics based on information from college freshmen, about 80% of students have studied related information technology courses during middle and high school. However, due to the heavy workload of students, information technology courses are usually offered as elective subjects, rather than mandatory or entrance exam subjects. This has resulted in an inevitable situation where there are significant gaps in the computer basic skills tests for freshmen in college. Less than 10% of college students who enter school meet the basic skill requirements set forth in the "Outline of Computer Fundamentals Course for Colleges and Universities". Less than half of the students have taken computer classes and can proficiently use computers, while the remaining students mainly use computers for online shopping, browsing information, and watching videos. College students' mastery of computers is still at a basic level, which inevitably poses difficulties for the organization of computer basic courses in schools. If the course's difficulty is too low, high-achieving students may feel unsatisfied, but if the course's difficulty is too high, only a few students can accept it, but most students with average grades may not want to accept it, which can compromise the overall quality of the teaching.

### 1.2 Relatively outdated implementation methods of teaching organization

At present, in some universities, traditional methods such as teacher led classroom lectures and auxiliary experimental exercises are still used in computer basic teaching. This approach does not truly take students as the subject of learning, nor has it successfully stimulated their learning enthusiasm, failing to provide students with a deeper understanding of computer knowledge and practical

operations. At the same time, from the perspective of the external computer development environment, information technology is rapidly developing, products are constantly being updated, and software and hardware technologies are also rapidly advancing. However, the basic computer courses offered in universities have not been effectively integrated with new knowledge, technologies, and products, resulting in a huge gap between the cultivation of students' computational thinking and the needs of real society.

## 2. Teaching Mode Reform of College Computer Basic Courses under the Background of "Internet plus"

### 2.1 Basic ideas

In China, "Internet plus" education is still in its infancy. To ensure the quality of the teaching process, supervision, feedback, and evaluation are necessary. At the same time, students' initiative should be fully utilized to avoid the problem of alternative learning and exams. When implementing teaching, students can complete the entire course learning in the integrated laboratory of science and training under the supervision of the teacher. They can learn by watching online teaching videos, conducting online exams, completing online assignments, and writing experimental reports. Students can use computers to automatically submit online exam answers and submit experimental works online. Teachers can grade homework in their spare time, conduct real-time attendance supervision, conduct online Q&A (question and answer), and push teaching difficulty analysis.

### 2.2 Specific implementation

Students are exposed to computer-related courses from elementary school to middle school, and then to university, which is the reason why the basic computer courses in universities are different from other courses in the talent cultivation program for college students. At different learning stages, the learning difficulty, teaching objectives, and talent development direction of computer courses may vary. Under the background of "Internet plus education", the teaching reform of basic computer courses in colleges and universities mainly focuses on the following three aspects:

#### 2.2.1 Research on the "Internet plus education" mode

By integrating auxiliary learning tools such as online learning platforms, WeChat groups, and mobile applications, centralized and decentralized teaching can be combined, providing regularly pushed key and difficult videos, theoretical articles, and other learning materials. This allows students to solve problems at any time during the learning process, promote them to become the main body of learning, engage in autonomous learning, and cultivate computational thinking abilities. On this basis, teachers play an auxiliary role, providing guidance to students and utilizing online platforms to establish evaluation systems. This move aims to better support students' learning process, ensure that they can fully utilize modern technology for learning, and receive appropriate evaluations and feedback.

#### 2.2.2 Establishment of a curriculum model that meets social needs

The construction of computer basic courses in universities should be guided by the social demand for talents, and based on the Internet, corresponding teaching plans should be formulated according to the characteristics of different majors. When selecting the teaching content and methods of the course, it is necessary to make differentiated choices based on the actual situation, and make reasonable improvements and adjustments. At the same time, based on the majors and needs of students, the course teaching content is moderately supplemented, and personalized teaching organization is carried out according to students' learning situations, adopting a hierarchical teaching method. In addition, courses should be reasonably designed based on the special needs and ability needs of society for talents in various professional fields, and teaching models should be adjusted if necessary to adapt to the constantly changing social needs. This teaching mode can better meet the learning needs of students and cultivate excellent talents who can adapt to social development.

#### 2.2.3 Research on teaching content

When constructing computer basic courses in universities, it is necessary to fully consider the impact of students' learning of the course on their future professional development. Therefore, teaching content should be designed based on professional needs to enhance students' professional quality and broaden their understanding of professional knowledge. The teaching syllabus should adopt a hierarchical and phased approach, combining teaching and practice to meet the needs of students in different majors. For example, in the field of financial management, one can enhance their in-depth learning of Excel spreadsheets; in the field of environmental art and design, the proportion of VISIO and other software used in the curriculum can be increased. Through such teaching arrangements, students' professional requirements can be better met and a solid foundation can be laid for their future development.

#### 2.2.4 Combination of multiple teaching methods

Nowadays, classroom teaching is no longer dominated by teachers, but rather returns the initiative of the classroom to students,

allowing them to play a more important role in learning. It is necessary to fully consider the differences in the learning foundation of each student and use online on-demand platforms for teaching, adopting a modular, project-based, grouped, specialized, and hierarchical centralized teaching method. By utilizing third-party platforms such as mobile apps as auxiliary learning platforms, students can communicate and answer questions in real-time anytime and anywhere, effectively extending teaching time and improving learning outcomes. This teaching model can better stimulate students' interest and enthusiasm in learning, enable them to participate in learning more autonomously, and further improve the quality of teaching.

## Conclusions:

In college computer teaching, the development and application of "Internet plus" technology has become a hot topic and development direction. This technology has brought new challenges to traditional education and learning, promoting changes in the roles and teaching models of teachers and students, presenting personalized characteristics in students' learning, and promoting openness in education and teaching. In the era of "Internet plus", the teaching reform of basic computer courses in colleges and universities aims to meet the needs of students at different levels, adapt to the knowledge acceptance ability of different learners, remove the space-time constraints, and maximize resource sharing. Through the application of "Internet plus education" in the basic computer courses in colleges and universities, students' overall mastery of basic computer knowledge can be improved, and their computing thinking ability can be cultivated, laying a good foundation for their future personalized development.

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