

# *Research on the Teaching Reform of Computer Public Course in Local Colleges and Universities*

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**Abstract:** This paper takes local colleges and universities as the research scope, takes the teaching situation of computer public courses as the research object, analyzes the problems existing in the teaching of computer public courses in local colleges and universities, and puts forward some improvement strategies. Through reform, it is expected to improve the overall teaching quality of computer public courses and better achieve the teaching goal of improving students' information literacy.

## 1. Introduction

College computer public course is a basic computer course for non-computer majors in colleges and universities. The course content is divided into two parts: theory and practice, including basic computer knowledge, operating system and office software use, web page production, database, computer network and information security knowledge. This course is a compulsory course for freshmen. The goal is to enable college students to understand the basic concepts and basic knowledge of computers through teaching, to use typical system software and application software more skillfully, to have the basic ability to use computers safely and deal with computer network security, and to adapt to the modern information technology environment. The basic ability of education, learning and working methods. The purpose of the course is to improve students' computer information literacy, build a public platform for computer application technology for their subsequent professional courses and careers, and highlight the basic status and instrumental role of the course. Computer-related information technology is one of the scientific literacy that college students must possess. How to improve students' ability to use computers to solve practical problems, how to enable students to adapt to the rapid development of information technology and meet the needs of high-level applied talents, has become a concern of college computer basic courses. With the continuous improvement of China's information level, the social environment of students has changed greatly. Many of our teaching contents and teaching methods are no longer adapted to the current social environment, which affects the cultivation of students' information literacy. Because different levels of universities have different training objectives for students, this paper only takes Taishan University as an example to study non-key local undergraduate universities [1-2].

## 2. Problems in the Teaching of Computer Public Courses in Colleges and Universities

(1) Students' basic level is not neat, failed to teach students in accordance with their aptitude. Taishan University recruits students in 27 provinces and cities across the country. Different provinces and cities have different teaching contents and teaching objectives for information technology courses, and students attach different importance to them. For example, in Zhejiang Province, information technology is a college entrance examination subject. Schools and students naturally pay more attention than other provinces and cities. Similarly, the requirements of different provinces and cities are different. The family situation of the students also has a great influence on the computer level of the students. The economic conditions of the eastern cities are relatively good. Many students can access to the computer from an early age, and even participate in extracurricular training and various competitions. Many children in the western rural areas can only access to the computer during the limited time of school teaching, and the computer level naturally has a certain gap with other students. In school teaching, schools often fail to teach students in accordance with their aptitude, resulting in some students not eating enough and some students not digesting [3].

(2) Ignore the characteristics of the school, the teaching content is not scientific enough. In 2019, Taishan University carried out sub-professional teaching. Liberal arts majors learn ' computer culture foundation ' and science and engineering majors learn ' Python programming '. The original intention of classified teaching is correct. Liberal arts students learn computer courses mainly for daily office work, while many science and engineering students need to use programming technology when learning this major. However, the classification does not fully consider the characteristics of the school. Taishan University and other local ordinary undergraduate colleges and universities are mainly applied, and the students are mainly applied talents who serve the local areas. Students in such colleges and universities are more suitable for the course content of ' Computer Culture Foundation ', and programming is more important for science students in research universities [4].

(3) Teaching has the situation of emphasizing theory and neglecting practice. At present, the computer public course of Taishan University is 48 hours per semester, of which 32 hours are theoretical courses and 16 hours are computer courses. The pure theoretical content in the teaching content actually only accounts for about 10 hours and the rest of the content is mainly operational content, including the use of the operating system and the operation of office software. For the use of some software, the teacher tells students in the class is easy to understand, to learn these only need to operate practice, and practical lessons and theoretical lessons are often discontinuous. However, students can not remember how to operate in the computer class, but also practice while reading books, the effect of the computer class is greatly reduced. [5]

(4) The teaching content does not reflect the idea of localization. In recent years, the state has strongly supported the development of domestic software. Many organs and institutions have adopted domestic operating systems. Domestic WPS has a strong momentum of development in China and has become the first choice for many users. Office software, while we still use Microsoft 's windows and office as the main content of teaching, domestic operating systems and office software are almost not involved, which may cause a disconnection between learning and practice. Students cannot use domestic systems and software well after work, which is not conducive to the development and popularization of domestic software [6].

## 3. College Computer Public Course Teaching Reform Strategy

(1) Adopt graded teaching according to students ' basic differences. After entering the school, the freshmen are tested theoretically and practically, and are divided into three levels according to the test results. The first level is the ordinary class, which still adopts the traditional teaching

curriculum and teaching mode; the second level is fast class, which can appropriately reduce the number of class hours; to achieve the three level after the examination can be exempted, directly participate in the final course examination. In this way, students with a better foundation can take time to learn other courses of interest and improve their learning efficiency [7].

(2) Add domestic software in the teaching content. The operating system part still uses the Windows operating system as the main content of the teaching, and increases the use of the domestic Kirin operating system. It is recommended that the theory 2 hours, the computer 4 hours. The office software takes domestic WPS as the teaching content, and WPS as the domestic office software. It has high maturity and high utilization rate. It can completely replace Microsoft's office as teaching. Students can better understand and use domestic software without affecting the learning effect, which helps to improve the sense of national honor [8].

(3) Adjust the curriculum by professional teaching. The liberal arts students adopt the traditional teaching content, and the science and engineering students adopt the traditional content + Python programming method, with half of each part. A Python programming elective course for non-computer majors is offered for students with high programming requirements and interest. On the one hand, it meets the needs of ordinary science and engineering students for basic computer knowledge, and also provides in-depth learning opportunities for students who want to further improve themselves.

(4) Create a classroom teaching mode combining theory and practice.

Because the core content of the commonly used office software is the software operation of the computer, this part of the content is suitable for practicing while speaking and the actual operation content of this part can be taught in the experimental class. After finishing a set of knowledge points, the teacher follows up with a practical exercise, including the knowledge points just talked about, so that students can take advantage of the hot iron, use the knowledge they have just acquired to complete the exercise, and get the enhanced absorption of knowledge.

#### 4. Summary

Based on the teaching practice of computer public courses in local colleges and universities, this paper analyzes the problems existing in the teaching of computer public courses in local colleges and universities, such as students' level, teaching content, teaching mode and so on. On this basis, it puts forward some reform ideas, such as graded teaching, reasonable setting of teaching content according to the characteristics of the school, and creating a classroom teaching mode combining theory and practice. These reform ideas are the summary of the author's experience in computer public course teaching for many years, which is suitable for local colleges and universities similar to Taishan University where the author is located. Through the reform and research on all aspects of teaching, this paper explores the talent training mode of applied universities, provides reference for the reform of computer public basic courses in local universities, and meets the requirements of high-quality talent training under the background of "new engineering".

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