Research and Discussion of University Computer Basic Course Teaching

Zheng-Guo ZHU¹,a

¹College of mathematics and Computer of Panzhihua University, Panzhihua, Sichuan, China.

¹115824141@qq.com

Keywords: Foundation Teaching of Computer, Reformation of Teaching, Case Teaching Method.

Abstract. With the wide range of computer applications and more rapid development of applied technology, the society needs college students with more computer technology knowledge and stronger ability of computer technology applications. So the teaching contents, methods and measures of university computer class foundation teaching need to be improved and make a great break through. This article brings out some suggestions for university computer foundation teaching, on the base of discussing the shortcomings of the foundation teaching of computer at the moment.

Introduction

With the rapid development of computer’s application and popularization, information society requires college students to have more abundant computer knowledge and higher requirements of computer applications ability. The training objectives, teaching content, teaching method and teaching means of University Computer Basic Course are required to be improved. Teachers should pay more attention to cultivate students’ practical ability, application skills and innovation ability, in order to combine computer technology and with their major closely. So students can serve the society better in various fields.

General Situation and Shortages of Computer Basic Teaching for Non-Computer Majors

Computer basic level of college students has a big gap. At present, the teaching of University Computer Foundation for non-computer major students is proceeded into two semesters, called basic computer one and basic computer two separately, and also called basic computer A and basic computer B. At present, the learning levels of non-computer professional students vary largely. Some students are familiar with the content of text books. Some students may just get some points. Even some students haven’t ever touched computers. From questionnaires to students, the reasons may be as follows: First, some students come from east district, contacting computer very early at school. So they have already mastered some basic application of computer. Second, some students are from rich families relatively, so they have their own computers at home. Third, before going to college, the middle school or senior high school may open computer courses. But the middle school or senior high school didn’t pay much attention to computer course then, so the students didn’t work hard. Fourth, students coming from west countryside don’t have computer courses, so the students have not used computers before. Based on these, the teaching content, teaching method and teaching means of computer basic teaching needs to make a change. For those students familiar with computers, they may feel bored and lose interests in class facing the mastered contents. However, for those who lack of computer basis, they may not understand if teachers don’t explain the contents in details, which would also cause them to lose computer learning interests.

Computer basic teaching is still exam-oriented education at present. At present, the students are required to attend Computer Rank Examination after finishing basic computer one, so the aim for computer basic teaching is to make the students pass the examination successfully and universities also treat the CET rate as an important index of assessment of teaching. However, many students even passing through the examination can’t use the learned knowledge to solve the practical problems.
Computer rank examination using a paperless examination. Now, in our country, computers are used in rank examination normally, instead of traditional paper examination, and with this method, the students’ operational ability can be checked easily.

Teaching methods are single. At present, in our country, colleges and universities generally adopt this method. First, teachers use multi-media to teach theory and demonstrate operations to the students in a big classroom, and then arrange students to practice in computer lab. Students generally have a reaction that they have forgotten contents learned at class when they come to the computer lab. At present, the basic teaching materials of our country are all the same basically. After finishing computer basic course, students don’t make good use of knowledge to solve practical problems and don’t have a deep impression about the learned knowledge. After the first Grade, many students have forgotten what they have learned, and this is the most general schools’ existing problem at present.

How to Develop Non-Computer Specialty Computer Basic Course Teaching of University

Aim to improve our country’s current situation and solve the shortages of computer basic course teaching, there are some suggestions for various colleges and universities computer basic course teaching reformation:

Pay more attention to the combination of theoretical teaching and experimental teaching. At present, the combination of theoretical teaching and experimental teaching is not very close. Some teachers only engage in theoretical teaching and the other teachers only engage in experimental teaching. Teachers engaging in theoretical teaching should teach experiment course themselves so that teachers can be very good to combine teaching contents and practical teaching, through practice to verify the theory teaching.

To strengthen the school and enterprise cooperation. To building the long-term cooperation mechanism between the schools and enterprises, enterprise can invest the construction of laboratory for school. Making use of the laboratory that enterprises build, schools can offer talents to enterprises. At present, teaching has disconnected to social demands. So the cooperation between schools and enterprise should be strengthened, school should set up some majors that social need urgently. Schools try their best to let students learn theoretical knowledge well during the school and use the theoretical knowledge well in the school laboratory, then schools organize these students to practice in enterprise to make full use of the theoretical knowledge to solve the practical problems.

To update teaching contents in time. With the rapidly development of computer technology, computer basic teaching contents take the new changes every year, which requires teachers to update teaching contents constantly, enrich teaching contents, learn new knowledge constantly. Knowledge which is written not in teaching material, teachers also should give students updating timely.

Improve the teaching circumstance. Computer basic course is a course which demands strong operational ability. School should provide good learning circumstances for students to learn. College should pay more attention to computer center laboratory equipments. What’s more, hardware equipments and learning software needed to be updated continually, so that students can make full use of the resource provided by school.

Pay more attention to reform of teaching materials. It’s important to adapt appropriate teaching materials according to the students’ situation. Most basic computer teaching materials for sale are mostly consistent. Every college should combine their own students’ situation to prepare teaching materials flexibly according to the grade exam outline. The teaching material should aim to cultivate and improve students’ ability, making them handle information in computer and solving the practical problems, instead of dealing with grade examination.

Adopt to case teaching method. The traditional teaching method is taking the teachers as the center. For this method, teachers teach the theoretical knowledge and the examples on the book in the class, then students do exercises on the book. After that students practice in the computer room. During the whole process, students accept knowledge passively rather than learn by themselves. Case teaching method is different from traditional teaching method. In teaching process, teachers don’t teach the theory firstly but show a case in real life for students which contains the knowledge taught.
Pay attention to adopting computational thinking. To train students to solve problems in the use of computational thinking and introduce computational thinking in computer basic course teaching. In order to cultivate students' computational thinking, teachers should introduce computational thinking gradually in computer basic course teaching, changing the traditional teaching method. We should explain the knowledge points, and combine the computational thinking with the contents of the curriculum to improve students' enthusiasm for learning and encourage students’ interests of exploring computer science field. In the process of computer basic course teaching, both theory teaching and experience teaching process contain computational thinking. So when teachers teach computer basic knowledge they can teach the connotation of science and science thinking, computational thinking connotation and concept, the character of computational thinking. When teaching the basic knowledge of computer basic course, teachers should show the relationship between knowledge points and computational thinking. In operating process, teachers should teach the students how to apply computational thinking. Facing the rapid development of computer technology in the future, students must master the computational thinking, and learn the essence of computer, so they can quickly digest the new knowledge, no matter how computer develop and change.

Summary

With the rapid development of computer technology and popularization of computer, the information society comes up with higher demands on the Contemporary College Students. It requires the students to have more abundant knowledge and higher operation abilities of computer. At the same time, it requires the teachers who work on computer basic course should update teaching contents in time and improve teaching method constantly, and should pay attention to the cultivation of their own quality, so they can explore suitable teaching means and methods of the contemporary gradually.

References

[1] LinLin Song, Influencing factor and countermeasures of college computer basic teaching reform at the present stage, Science and Technology Innovation Herald. 23(2013)129.