

Chapter 6

Teaching Reform for University Computer Information Technology Curriculum

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Abstract Currently, our country's basic computer education reform is in an important turning point, a transition to the starting point of information technology education popularization is from university to primary and secondary school. Since in primary and secondary schools, there are "information technology education" courses, how to reform the university information technology, how to reflect the course of information technology education in university, how to link primary and middle schools education, how to follow the rapid development in information technology, all of these are urgent in basic computer teaching reform in colleges and universities.

Keywords University computer • Information technology • Teaching • Current situation • Strategy

6.1 Foreword

With the rapid development in information technology, computer and network have come into people's work and life deeply and to be familiar with and master the basic knowledge and skills of computer information process technology is one of the essential conditions to be qualified for the job and adapt to the social development. Just like the higher mathematics and university physics, computer information process technology is a public basic course that the high school must offer. Recently, with the rapid development in computer information technology and increasing popularity of computer application, Chinese middle and primary schools have gradually opened the course of information technology, which makes the high school freshmen to have some basis for the computer knowledge and operation. In this situation, how to correctly position the university computer information

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technology curriculum, organize course contents and the model of teaching and make up the differences of knowledge and skills of zero point and nonzero starting point students is a task that we need to strive to study and solve [1].

Recently, Chinese middle and primary schools have gradually opened the course of information technology, which makes the high school freshmen to have some basis for the computer knowledge and operation, and then, how to correctly position the university computer information technology curriculum? We need to pay attention to the following points:

First, clear and define the differences between university learning and high school learning. The university learning process needs more information technology which means not only learning some simple computer basic knowledge and skills but also paying more attention to cultivation of college students' thinking ability, innovation ability and autonomous learning ability. In the teaching process, many undergraduates may have a doubt that computer information technology curriculum is to learn some basic computer skills which have been taught in junior high and high school. In addition, many undergraduates also think to know how to operate the computer is enough, and there is no need to learn theoretical knowledge. As for that, before classes begin, teachers must let undergraduates understand information technology is not equal to computer operation and they need to constantly excavate their innovation ability and thinking ability.

Second, colleges and universities teach according to subject classification, and different subjects require corresponding information skills. In addition, different subjects require different information skills, but middle and primary schools have just taught some basic concepts and skills, so schools need to further cultivate students' ability to use information technology to learn professional curriculum in university study [2].

Third, as information technology has a very wide range and update quickly, which can help undergraduates understand the newest current information technology at home and abroad to keep up with the pace of the development era, it is necessary for undergraduates to learn knowledge and skills of information technology.

Through this course, teachers must help students get the ability to obtain, analyze and use information, cultivate their good information literacy, encourage undergraduate to take information technology as a method for their lifelong learning and cooperative learning to lay a good foundation for adapting to the future study, life and work.

6.2 Current Situation of Teaching of University Computer Information Technology Curriculum

At present, current situation of teaching of university computer information technology curriculum is mainly displayed in the following points:

First, college students' computer level is uneven. As we all know, college students are all derived from various provinces where the level of economic

development and education is not balanced, so the popularity and speed of computer knowledge are also different, which make the freshmen to have big otherness in computer basic knowledge level. Even in the same class, students' computer basic knowledge and operation application ability are still different. Some students have been able to use the computer skillfully, while others have never seen a computer. Students with good foundation and high level generally reflect that the content is not enough and hope teachers to teach more. But those students with weak foundation reflect that it is difficult to understand teacher's normal teaching, which make each side has complaints. That college students' computer level is uneven, which has increased teaching difficulty. What is more, with the popularization of computer knowledge, more and more freshmen have once used the computer; if we still use the traditional teaching mode, there will be some negative effects.

Second, in most Chinese colleges and universities, computer information technology teaching materials adopt the book university computer information technology tutorial with single target and multifarious content. The situation increasingly does not adapt to the teaching characteristics of different disciplines and majors. It is difficult to achieve teaching goals of different subjects without reforming the traditional teaching mode.

Third, the curriculum content is more, and lesson is little. Generally speaking, college students' computer information technology curriculum includes principle of computer form, computer network, computer software, multimedia technology, database and information system and other course knowledge, and knowledge capacity is great, but universities only allocate very little time, which makes students feel that the contents are so much that it is difficult for them to understand and absorb the knowledge. The situation will cause two tendencies that students with good foundation want more knowledge, while students with weak foundation feel hard to learn.

6.3 How to Reform Teaching of College Computer Information Technology Curriculum

Through the above situation, the traditional teaching mode has not been able to satisfy the existing teaching requirements, so it is imperative to reform teaching of college computer information technology curriculum.

First, use the multimedia teaching. In the teaching practice, the teacher is a guide to students' learning and also the promoter for the students' exchange and the advocate of students' learning interest. Modern multimedia technology is the best tool for teachers to play the leading role. With multimedia, teachers can show students the work principle of computer CPU, virtual memory principle and some boring, drab, abstract and difficult knowledge, which makes the work mechanism process and visualization so that it is convenient to students to understand. In addition, multimedia technology can provide students colorful and illustrated interface, which breaks

the traditional teaching mode like teacher speak—students remember—recite after school, and the expression of teaching content is more intuitive.

At the same time, teachers also need to note using method of multimedia technology. If they only transfer all of the knowledge, that will make it hard for students to focus on priorities and impression is not deep just like watching movie. So, teachers need to supplement some traditional teaching methods to combine two ways organically to improve teaching efficiency radically.

Second, improve the teaching content. The refresh rate of Introduction to Computer Technology is so fast that no matter hardware or software changes quickly. However, university teaching content is always relatively slow. So, the model of teaching for Introduction to Computer Technology should not only grasp the teaching material, it should be based on it, while not get bogged down in the teaching [3]. What is more, we need to properly update the teaching contents and permeate new ideas, new methods and new knowledge. In theory teaching, teachers can appropriately collect some new products and technology that are not mentioned and show them in class. For example, when teaching mobile communication system, teachers can combine with the actual situation and explain present most popular 3G technology, which can greatly improve students' interest in study and learning initiative.

Third, implement the layer teaching. The layer teaching in teaching process means determining teaching goals of different levels from students' actual conditions and arranging different levels of teaching contents and teaching tests. The teaching method can create learning interest in different students and obtain something so as to accomplish the teaching task. Universities should first classify students according to arts and science to make students study the content selectively, and teachers can also teach them selectively. Then, schools can arrange different learning goals that should be achieved by all levels of students in teaching activities according to different situations of students' computer basic knowledge to enrich their knowledge structure so that they can adapt to future informatization social environment.

Fourth, complete the teaching evaluation. In the course system, curriculum evaluation plays a role of quality supervision and incentive guiding. In the teaching process of university computer information technology, we need to timely evaluate the teachers' teaching and students' learning, which can get the two-way information of teaching and learning, find the issues on time and adjust the teaching method to improve the teaching quality continuously. Introduction to Computer Technology is a practical course, and teachers must evaluate student's study and operation on time and couple back information, so students have a correct understanding of their own learning and continually get feeling of success to increase confidence and improve the learning interest.

In a word, the major objective of Introduction to Computer Technology is to cultivate students' application ability of information technology and to obtain analysis and process information with modern information technology. University computer teachers should fully combine characteristics of this course and use all sorts of software and hardware resources to help undergraduates firmly master the

operation ability and the innovation ability that are needed by information society. Only if the contemporary university students' information literacy is comprehensively improved, can the overall quality of Chinese society be improved so that we can have a brighter future!

References

1. Jingdian J, Xindi Z (2011) Exploration of teaching reform of computer information technology curriculum. *Value Eng* 01:38–46
2. Huang Y (2011) Discussion of basic teaching methods for computer application management and technology of SME, 01:98–107
3. Liu B (2005) Teaching design of IT fundamentals. *Chizhou Coll J* 03:348–354