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Research on College Information Technology Curriculum Teaching Reform Based on Depth Learning

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Abstract. As a curriculum which insists theoretical knowledge and practical ability equally, college information and technology curriculum is a great challenge for students' learning ability and teachers' teaching level. How to improve college students' depth learning through the efficiency promotion brought by current information technology teaching is an important issue for teachers. This paper deeply studied the college information technology curriculum and teaching status, summarized the course contents, systematically analyzed the information technology course contents and teaching reform respectively and put forward information technology curriculum teaching reform methods, which will make the college information technology curriculum implementation more success.

Introduction

At the same time of gradual development of informationization, information technology, which is the basic requirement of talents, is also an important test for teachers' teaching level. Because of the uneven learning ability of students and great amount of learning contents, the information technology teaching at this stage makes it difficult for students' balanced development of information technology ability. Therefore, it is imperative to implement courses reform in information technology curriculum. Research on information technology curriculum pattern has become the common task for teachers.

Current situation of college information technology curriculum

Now the teaching of college information technology divides into two parts: theory and practice. As a public compulsory course when freshman go to college, it is aimed at enhance students' theoretical and practical ability and then lays root for National Computer One. However, during the implementation process of current teaching, because of the wide scope of theoretical knowledge, less classes and fast speed of teaching, the acceptance of knowledge is really hard for students and it is difficult to fully master learned knowledge. What's more, one teacher is always teaching more than forty students which can't thoroughly solve the problems of some students and timely communicate with students after class. Finally the computer operation ability of students will become poor and they can't adapt to the basic requirements of computer examination.

Uneven students' level and more difficult classroom teaching. With the development of informationized education, as the new curriculum standard teaching content, information technology courses are launched in middle and primary school in various regions. Due to the different emphasis of information technology courses and in each school and the ability gap among students from different regions, college information technology teaching faces huge barriers. Some students think that the lessons are too difficult, while some have been able to skillful use the knowledge for a long time, so they are not concentrate in class, which will lead to the frustration of teaching enthusiasm and influence the implementation of teaching goal.

Fast-update information technology curriculum. New learning software which are produced with the development of information has great effect on content of courses and teaching practicability. The ideas and methods of information technology are keep going, at the same time the teaching content is becoming more and more. Students from different majors are learning the same knowledge, which increase the learning burden and difficulty of learning. What's more, the simplicity of teaching materials and traditional teaching methods are not helpful for students' self-regulation of learning and

lack interactive model of cooperate learning which are all the problems faced by current information technology development.

Objectives of college information technology education and curriculum system research

Teaching objective of college information technology. Information literacy includes artistic appreciation, information consciousness and information technology. Nowadays Chinese information education carries on the conformity in information technology and academic contents and the information literacy teaching for college students is developed from early information retrieval and computer education. National Medium- and Long-Term Plan for Human Resource Development puts forwards requirements for innovative talents. Innovative talents should not only possess higher information literacy ability but also higher innovation power. Sustainable competitiveness of innovative talents is depended on the information literacy.

According to the demands of social talents in information age and aiming at the objective of college information technology education, students should understand information cultural knowledge, possess basic information technology, enhance their innovation power and information consciousness and be trained the adaptation ability of information technology, which achieves the unification of "information cultural knowledge, application information skill and innovate information technology methods" and makes students have overall understanding of the inner link of nature and society, cultivate capability to identity problems and solutions on own initiative and promote their application practice and innovation power.

Curriculum system of college information technology education. College information technology teaching curriculum system has three characters of hierarchy, integration and continuity. According to the different professional standards and ability, curriculum education can be divided into three stages: basic knowledge stage, ability training stage and application innovation stage. In junior grade, students usually learn information culture, safety awareness, computer hardware institution and information system and some basic software operation, like Office; in middle grade, students learn more about the basic operation of multimedia technology, image and other professional software; in senior grade, students usually learn the application operation of professional information technology or make innovation after integrating with their major, which will cultivate their independent operation ability.

In different school teaching, curriculum provisions are adjusted with different schemes---obligatory + some elective modularity courses, for example: the curriculum provision of electronic information major is usually college information basic courses + multimedia basic courses, computer aided design, programming, data statistics and analysis, etc. The curriculum provision of cultural media majors is usually college information technology basis + multimedia technology basis, image processing software and web design and production. Learning different knowledge for miscellaneous majors can achieve the cultivation of students' professional information technology ability.

Research on college information technology curriculum teaching reform

Preview before class. When teaching new courses, teachers can make statistics of the understanding degree of students for new course and publish the learning requirement of new course. Preparation before class includes study materials collection and learning tasks arrangement, for example: designing questions as the guide of new course and comprehensive study tasks in critical process. What's more, teachers should instruct students the preparation before reading and lead them to raising questions in class. This kind of teaching method can stimulate students' learning enthusiasm and curiosity, be helpful for understanding students' intellectual level, make teachers comprehensively answer the questions put forwards by different levels of students and make them have strong learning motivation.

Communication and share in class. College students have already possessed complete linguistic organization ability and communication ability. Under the situation of uneven proficiency level, learning complementary among students can be organized. Teachers can also let students report their doubts and other choose students to answer them by describing the solving methods in details and welcome other students' supplement and query, which will make class atmosphere easy and promote the knowledge communication among students.

Independently inquiry after class. Teachers can provide learning materials like PowerPoint or micro videos to satisfy the needs of students of different cognitive ability. College students can also utilize rich information technology materials for self-regulated learning after class, answer their own questions and find effective solving solutions in practice.

Curriculum reform of college information technology teaching

Reform of teaching content. We have had basic understanding of college computer courses of each stage. In college information technology curriculum, the public required courses are always 32 class hours in the first semester of freshmen and 5 theoretical knowledge modules and 8 experiment teaching modules need to be learned. The task is hard and the students are pressed for time. We can organize the teaching contents, simplify the knowledge reasonably and satisfy every student's learning need according to the demand of the major. For example, students majoring in accounting should focus on Word, Excel and PowerPoint and the learning of the application of Excel advanced functions, which will satisfy the basic requirement of accounting profession. While for students majoring in tourism, they should learn more about PPT and Excel forms rather than advanced functions. What's more, for some popular operation courses, like search engine and video playing, can be made a casual remark in passing.

Reform of teaching pattern. For students who don't major in computer, the study direction is skillful application in their professional field and the goal is to be inter-disciplinary talents. In traditional class, teachers always control students. This kind of teaching makes student have a firm grasp of theoretical knowledge, but students' open mind is restricted to a great extent and the learning of knowledge are passive, which is not good for the promotion and the extend of innovative thinking. Therefore, it can't play the major role of students in class and it is really important to let students accept knowledge forwardly. For example, the teaching location of theory courses can be arranged in computer room and "concept teaching + self-study + practice" teaching mode can be used. Making the teaching mode of teacher as the supervisor to students' self-study will allow teachers spend more time on exploiting self-study ability and cultivate innovative thinking, which makes students adapt to the environment actively in society and possess self-learning operation ability.

Reform of teaching methods. By using the method of case teaching, during college information technology basic teaching process, teachers should make teaching tasks for each module and then let students do pertinent practices, which will make students have objectives during learning process, have deep understanding of their own major and easily and firmly master knowledge points. On the basis of this kind of teaching method, teachers can also check the results when finishing the tasks and adjust according to the acquisition knowledge or save and display students' production. For example, some exquisite PPT can be as models for appreciation or some engineering drawing made by professional software can be printed for reference. This way will make students feel proud of their work and the teachers can also further explain the key and difficult points of the cases in details. During this process, students consolidate the knowledge and cultivate their self-learning ability.

Reform of teaching content. Because of the rapid development of information technology and fast upgrading, teachers can use various teaching methods to rich the teaching contents. Some textbook content is too abstract and obscure that students have no interests, so teachers can explain them in the way of entertainment, like movie, games, etc. For students majoring in e-commerce, teachers can combine the shopping process of Taobao with the major knowledge to create familiarity. Of course this needs the active communication with students and accept opinions to extend or cut

textbook content and correct the outdated part. Don't stand still and refuse to make new progress and frontier knowledge should be taught to students.

Reform of teaching idea. As for the difference of computer skill of different majors, teachers can use multi-layered teaching idea appropriately. University can also test students' computer skill and put students of similar abilities into classes. For the students who are put into advanced class, they can choose other related classes, for example, art major students can choose Coreldraw or other image processing software after learning the basic knowledge of Photoshop. Rather than classroom-divided teaching, teaching at different levels can also be adopted which will allow each student gain something in class.

Conclusion

Teachers should instantly summarize the experience during teaching, add new teaching content according to current situation, organize education by different levels on the basis of students' professional abilities, make best use of task-driven teaching methods, improve teaching methods, play the role of practicalness of college information technology and then make further promotion of teaching quality. After the reform of information technology teaching, students can be motivated to a great extent and it have great significance in the depth learning of information technology curriculum and lifelong development of students.

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