The Application Exploration of Cloud Computing in Information Technology Teaching

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ABSTRACT

With the development of the times, the information technology course in primary and middle school is making more and more progress in reform. Currently, the integration of information technology with curriculum has the effect can’t be neglected in the field of education. Similarly, cloud computing is also appear in the field of vision of people, and constantly affects people’s way of life, work and study. Apply it to the primary and middle school information technology course teaching, Take advantage of cloud computing such as free, low hardware requirements, All kinds of online application service update timely, which can make new breakthroughs in information technology curriculum, promote the training of students’ information literacy and acquisition.

Keywords: Assisted Instruction, Cloud Computing, Information Technology, Information Technology Curriculum, Information Technology Teaching, Middle School

1. THE BASIC PRINCIPLE AND THE CURRENT SITUATION OF THE DEVELOPMENT OF CLOUD COMPUTING

The basic principle of cloud computing is that users do not need to run in the application of the terminal equipment such as personal computers, mobile phones, but running in the large scale of the Internet server cluster. The data to be processed is not stored in local, but save in the Internet data center. The normal operation of the data center management and maintenance is responsible by enterprise which provide services for cloud computing, and by them to ensure strong enough computing power and big enough storage space for use (Xu, 2009). At any time and any place, user can connect to the Internet terminal equipment. Therefore, whether business or personal, can be realized in the cloud with the need to be used. We call this kind of service provided by cloud computing Cloud services. It means that the needs of the people to use computers can serve as a kind of public goods in circulation.

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2. THE INFLUENCE OF CLOUD COMPUTING AIDED TEACHING TO INFORMATION TECHNOLOGY TEACHING

Compared with the traditional subject, information technology disciplines has its own characteristics in the teaching method, has the characteristics of asynchronous in the teaching schedule, teaching content and teaching request. Students are interactive fully in the learning process. has the typical characteristics of cooperation on learning method and the characteristics of openness on teaching content and teaching results and evaluate (ISTE, 2007). Cloud computing aided teaching provide some suitable and feasible solutions from the discipline characteristic of information technology and software and hardware information technology teaching needs (Li, 2008). The influence of Cloud computing aided teaching to information technology teaching mainly displays in the following respects:

First of all, can provide enough, practical, socializational hardware environment for school, Save the purchasing and maintenance costs of computer and network hardware equipment.

The next, can provide the school with the relative economic services of application software, training teachers and students the concept of using “cloud service”.

Finally, can give full play to the students and the characteristics of the discipline itself, to reach optimization of teaching and learning. Information technology course has the characteristics of asynchronous in the teaching process, teaching content and teaching request, is unlikely to appear the situation of the high unity of traditional disciplines, directly determines the variability and selectivity in teaching contents and progress. On the other hand, because information technology itself have extremely strong practicability, self-study, students’ learning progress often shows great difference in several ways. Students can formulate plans and resources conform to their knowledge level through the cloud computing service, and we don’t need to be consistent with the pace of all students, learning the same content. In the activities of information technology teaching, look from the students participating in the learning process, it has distinct characteristics that student “interactive” with the computer’s, students can enjoy relatively complete, advanced service in the process of “man-machine dialogue”. In the process of information technology teaching and learning, students can fully reflect the subjectivity, can truly realize the autonomous learning, teachers are really play a guide role, observe the students’ learning progress, can constantly guide students. Especially more powerful interactive function of cloud computing itself, such as online form can be completed survey feedback function and simple test. Group BBS function can provide the communication between teachers and students, attachment function can let the students to hand in assignments, etc.

3. THE IDEA OF PRIMARY AND MIDDLE SCHOOL INFORMATION TECHNOLOGY COURSE CONTENT BASED ON CLOUD COMPUTING

The following describes from two aspects envisaged the use of cloud computing in IT courses (Because of many current cloud computing platforms, the Google platform as an example).

3.1. Curriculum Content of Cloud Computing Tools into the Teaching of Information Technology in Primary and Secondary Schools

3.1.1. The OFFICE Software and Documentation Tool

OFFICE software (presentations, text documents, spreadsheets, graphics software, etc.) are very commonly used in everyday life and universal, and they are also essential in the teaching of information technology in primary and secondary schools. In the cloud computing platform, such as the documentation tool of
Research Challenges for Personal and Collective Awareness
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