The Practice and Research of the *College Computer Basic*'s Teaching in Local Normal College

Song Xu¹⁺, Cui JinKui ² and Zhi XianFang ³

¹ School of computer and information engineering

Anyang Normal University

Avenue xuange, Anyang City,PRC,455002

² Department of Electronic and Information

Nanjing College of Information Technology

WenLan Road, NanJing, , China,210046

³ Anyang Energy Conservation Supervision Center

YouYi Road, Anyang City,PRC,455002

Abstract. The *College Computer Basic* is a specialized public course of each major in college, with the development of computer technology its content is changing with each passing day. Local normal college is a significant component part of the higher education in china, it is important for the local normal college to adjust and optimize the teaching system, course content and teaching method to meet the requirement of course teaching. This paper mainly discussed about how to adjust and optimize the teaching system, course content and teaching method of the <<College Computer Basic>>'s Teaching in Local Normal College to meet the realistic requirement.

Keywords: Computer basic teaching; Teaching system; Teaching method; Teaching reform;

1. Introduction

With rapid development of information society, computer knowledge has become a indispensable part of contemporary college students' Knowledge structure. With colleges and universities continue to enrollment, all kinds of student-level are gradually widening the distance, and the boundaries is getting clear. the <<College Computer Basic>> education which architect in the main line of the information technology education is gradually increase the difficulty, therefore some new problems come: most students are basically clear the objective of studying for the basic computer course but not clear, non-specific; in teaching process, , there is fall short of the teachers teaching methods; the basis of the students are quite different; the contents of courses are much more than hours of the course, and is in a process of constant development, the teaching content must be constantly updated and so on. Faced with this series of problems, the <<College Computer Basic>> lesson's curriculum, course content of the organization should be adjust, and improve the teaching methods, emphasis on construction of teaching resource library, innovative education students, to achieve the objective of enhancing the ability of university students' computer applications, and to develop demand of innovative teaching practices. [1]

2. Researching of Teaching System

As the undergraduate enrollment, some students have basically commanded of the theory and operating skills of <<College Computer Basic>>, who are "non-beginners" students, but some are "Beginner" student, there are greater differences, the way which according to traditional natural class to teach can not meet the needs of students at different levels students' need is no longer suitable for new forms of development. [2] So the <<College Computer Basic>>'s curriculum should be adapted to differences, develop teaching system to facilitate student self-learning, while the level teaching system allows teachers to the according to

⁺ Corresponding author. *E-mail address*: songxu518@126.com

different levels of students' needs, use appropriate pace and depth of instruction to enhance teaching efficiency and to meet the shaggy levels of students' need.

2.1. The Level Of Teaching Goals

The <<College Computer Basic>>'s curriculum can be used three levels of teaching.

The first level is for computer literacy basic education. This level of education, mainly from the perspective of improving the knowledge structure for students in the computer knowledge and skills laid a more comprehensive foundation, while is service for the follow-up courses. The main contents are basic computer knowledge and basic computer operations, with emphasis on quality education, and enhance the learning computer initiative.

The second level is for computer technology basic education. This level of education mainly from to enhance students' the high-level language programming and debugging programs abilities and computer hardware cognitive abilities, cultivate students to have a good programming style, and thus able to resolve the practical problems in work and life. Mainly includes software design and hardware technology, with emphasis on mastery of programming languages.

The third level is for computer applications basic education. This level of education is mainly aimed at the needs of different majors settings corresponding closely with the students of the professional integration of course content, by learning to enable students to use computers to solve their own professional practical problems. Main content includes information security, information retrieval and multimedia software and so on, highlight on the application, cultivate students the awareness and ability of using computers to acquire, process information and solve practical problems. [3]

2.2. The Level Of The Teaching Process

First of all, it is necessary to prepare for the levels of teaching during the preparation of teaching. According to the level of teaching objectives, combined with the teaching materials and requirements of curriculum, for different levels of students design learning content which is suitable for the level, if necessary, supplement teaching materials which is not detail in the content or appropriately extend, clear the basis content and extended content of every class.

Secondly, it is necessary to prepare for the levels of teaching in teaching the course. For low-level students, teachers should put down your request and the starting point, focusing on to explain and demonstrate to let them master the necessary basic knowledge and skills; for the medium level of students, teachers should teach and practice detailedly, not only let them to master the basic knowledge and skills, but also must guide their independent problem-solving; for high-level students, in the original textbook knowledge has been consolidated cases, teachers should extent more examples of practice, give the level of students the chance to learn and think independently, focus on training them the ability of integrated using computer knowledge to solve practical problems. In the classroom teachers can use the way of open teaching, so that students can ask or discuss questions at any time, the way of using an equal dialogue can mobilize all the students in self-exploration. In the practice session, the basic problem to make all levels of students can do, the more difficult exercises to make low-level students can understand but not necessarily a requirement to do, so unknowingly carry out at different levels of teaching.

Again, it is necessary to prepare for the levels of practice in the machine guidance. For the <<College Computer Basic>> this course, experiment can directly help the students to consolidate theoretical knowledge and operational skills in class, and the experimental quality will directly affect student learning, so that teachers should to be hierarchical in practice teaching content. [5]For low-level students, the more are doing validation experiments, through experiments strengthen the foundation and consolidate the skills; for the medium-level students, on basis of the validation experiments add the design experiments, base on the consolidation of knowledge and skills, mobilize them the enthusiasm of learning, guide them to think independently; for high-level students, should be based on a comprehensive experiments, design some applied, flexible, and strong in exploration, a large quantity in thinking experiments.

In addition, in order to different levels of teaching can be applied smoothly, effectively, should we make full use of modern teaching methods, and pay attention to the construction and management of educational resources.

2.3. The Level Of Education Evaluation

As the teaching objectives and level of the teaching process, the schedule of teachers' teaching plan, the setting of evaluation standard and so on should have uniform requirements, but also a high degree of flexibility ,have a formation of a level of teaching evaluation. [6]Students should not dwell on the level of the current level of knowledge we should take into account the level of the students, with students in their

level of progress as the main measure, usually results accounting of overall rating should increase, dilute the testing of memory contents, add the rating of machine test, guide students to focus on understanding and application of knowledge points, thereby promoting the sound development of teaching.

3. Organization Of Teaching Content

Computer develop to today, range of applications become more and more wide, the contents need to learn become more and more, while the curriculum is limited, so in order to enable students under the level of teaching system to learn more knowledge, it is necessary to effectively organize teaching content.

3.1. The Knowledge Structure Of Teaching Content

In local normal Colleges, the knowledge structure of <<College Computer Basic>>'s teaching content should include the six aspects.

Basic knowledge of computers. Including the development of the computer history, number and coding, logic knowledge of computer, structure of the microcomputer, this is an important basic content of teaching.

Technology of software application. Including the Windows platform, Office and other software, this is the largest part of the whole curriculum system. In the teaching of software technology we can not simply stay in the use level, should be based on solving processes and methods of the problem, software technical knowledge point should be based on the methods and processes.

Computer network technology. The exchange of information and access to information through the network is an important means of communication in modern society in which people learn, work. The purpose of computer network teaching is to teach students to use of network technology, focus on training students the ability to access information through the network.

Multi-media application technology. To meet needs which the students have to design a high level of CAI courseware when they are working, teaching class not only the contain basic theory of multi-media, but also must teach students how to use the commonly used multimedia software (according to different disciplines require to systemic teach), the other must be established teaching resources platforms of Authorware, Flash, Photoshop and so on, supporting student self-learning, the focus is to train students to design a comprehensive capacity of CAI.

Computer programming. Including VB, VFP, C language, etc. (according to different disciplines require to systemic teach), for non-computer major students who are learning a computer language is not to train programmers, it is important through the program design method of learning, they have more understanding process and methods of computer processing, problem-solving.

The new computer technology and applications. Including new applications, new application software, etc., should be based on characteristics of different disciplines to enhance targeted introduction, the part of the content can be through lectures, network learning.

3.2. The Organizing Way Of Retrenching The Hard And New

As the teaching material involved in a lot of knowledge, while the extended knowledge are more abundance, then the contents of the teachers on how to make a choice among the many troubled teachers become difficult, we recommend adopt the organizing way of retrenching the hard and new to complete teaching contents. First, the teaching process is a highly condensed, general art, and the more simple things that the more able to deeply reflect the essence of things, so for those important and difficult, the basic concepts, principles, easy to generate interest, be able to inspire students, need to absorb the content should be refined, and those unimportant, meaning uncertain fragmented content should be concise and even discard, thus leaving behind a rich imagination of students; Secondly, teachers have to teach the contents of the depth, we must learn to grasp the essence of things, laws, must be good at digging the intrinsic link between the content and question, form a structured, complete and unified logic system; Finally, as far as possible make teaching content innovative and advanced, as far as possible make use of applied and system software, which is widely in use, as well as the relatively new technical knowledge, taking fully into account the development trends of computer information technology and increase multi-media knowledge and knowledge of networks, in particular Internet knowledge of application and the methods of use to make teaching content has strong characteristics of the times.

3.3. Teaching Methods

The Role of Local Normal College, which determines the teachers in the teaching process not only to impart knowledge, but also to help students how to choose, so it is particularly important to choose a Proper teaching way

Task-driven approach. The teachers in the teaching content is to design into one or more specific tasks, for students through a specific task to complete a master course content, to teaching objectives, active learning for students, teachers to guide the teaching method. Teachers in the use of task-driven approach to grasp the teaching content when the proposed task; and then to the common analysis tasks and students to explain the major and difficult, you can also master the knowledge needed to complete tasks given interesting examples point to improve student interest in learning; At the same time to regularly inspect and supervise tasks completed, be aware of, to prevent some students lazy, do not do plagiarism; the last to develop an objective and fair marking.

Succinctly and training process of teaching methods. "Basic Computer" is a highly operational programs, so succinctly and training process by teaching ways to train students in computer literacy and practical ability. In the actual teaching process, teachers work more than machine exercises with the main line, the content will be taught practical knowledge points system established for each student based on assessment of knowledge points to improve the theoretical instruction and practice of integration, students are learning Initiative and creativity. This approach helps students acquire knowledge in practice, to better develop students ability to operate.

Using the three method, teachers and students to study in the classroom to discuss the course content, so that teachers and students, between students and the students learn from each other to fully mobilize the enthusiasm of students, students from the "want me to learn"becomes"I want to study, "which greatly enhance the learning interest of students but also improve the self-learning ability.

Succinctly and with task-driven and the process of training and teaching way with interactive teaching methods, teaching process focused, simple, and fully mobilize the enthusiasm of the students and master the appropriate knowledge and skills, students reflect good results. For low-level students taught by teachers and their practice vividly to faster, better grasp the basic content of courses; for high level students, they learned a lot in the past do not understand or do not really grasp the knowledge and skills, deepen Awareness and understanding of the computer.

4. Recognition Of The Teaching Resource Library Construction

As the < College Computer Basic >> 'S curriculum hours constraints, teachers can not be repeated important and difficult to explain, also can not teach the exhaustive knowledge points, but the importance of building teaching resource library which is an important component of the course on the resource is prominent. under fully analyzing the teaching content and the student's ability ,we develop a basic computer network teaching platform for universities , provide students with all electronic lesson plans, experiment guide, application cases, important and difficult to explain, the operation demonstration, demonstration lectures and many other kinds of resources, provide teachers with the material database, test database resources for lesson preparation. At the same time we will also bring experiment report management system, online question-answering system, operating publishing and correcting system, the examination system into the resource library, achieve the integration predominance of the platform.

Teaching Resource Library building to enable the carrier of teaching content from a single paper media materials to the multi-media teaching materials, teaching methods from mainly rely on teacher change to mainly rely on student. Through the resource library, students can further adopt self-learning way and the consultative way to learn relevant content, deepen the understanding of knowledge points, but also exercise self-learning ability of students and promoting student initiative and enthusiasm.

5. Innovative Educations For Students And Conclusion

In the process of full implementation of quality education, giving emphasis to develop the creative abilities of students, actively exploring theories and methods of training innovative talents of high-quality, have important practical significance. However, the rapid development of computer technology makes the computer teaching is not likely to keep up its pace of the development of hardware and software, but how to improve student learning in the computer's ability to innovate in practice, it is a complex issue, it involves more factors. Therefore, we must focus on improving the quality of teachers themselves, can not simply be satisfied with " Preach , teach a job , remove doubts " ,should stimulate student curiosity and interest in learning when teaching in the classroom; cultivate the independence and autonomy of students; create a favorable creative teaching and learning environment and atmosphere of development; guide the students to actively carry out scientific and technological services; set up in class discussion; active thinking; to encourage and guide students to engage in scientific research; receive the innovative education forwardly, update their concepts; have the courage to put into practice, and constantly updated teaching content and

methods; create characteristics, individualized instruction mode of teaching mode; use their own sense of innovation, creativity and innovative capacity to infection, lead students in the formation and development of innovative ability, in carrying out the practice of innovative education to forge ahead.

Today, with the rapid development of information, computer has been an important tool in our life and work. As a course, 《College Computer Basic》's focus on training the abilities in application of computer, we have responsibilities, as well as obligation to perfect the teaching content、teaching method、teaching means、experimental teaching、teaching faculty、resource database to meet the requirements of social development, improve teaching quality and cultivate qualified talents.

6. References

- [1] Computer Science and Technology of Higher Education Steering Committee of Ministry of Education. With regard to further strengthen the institutions of higher learning the views of the computer-based teaching-cum-computer-based teaching basic requirements [M]. Beijing: Higher Education Press, 2006.
- [2] Zhang Ying, Zhao Ying. College Computer-based Exploration of Teaching Reform [J]. Liaoning University of Technology Journal (Social Science Edition), 2009 (8):118-120.
- [3] Su Genliang. The Discussion of College Computer-based Teaching Modes [J]. China Adult Education, 2006 (2): 122.
- [4] Li Wei, Peng Huiqing. The Exploration of Modular College Computer Basic Course Teaching Model Classification [J]. Tianjin Urban Construction Institute Journal, 2009 (9):232-235.
- [5] Tang Chu-wen. The Research of Computer-based Curriculum System And Teaching Reform practice [J]. Jingchu Institute of Technology Journal, 2009 (7):60-64.
- [6] LI Hai-fen, Li Dan-Qing. The proposals of improving the quality of China's institutions of higher education foundation courses [J]. Higher Education Exploration, 2008 (4): 68-71.