Research on Computer Teaching Reform in Higher Vocational Colleges

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Abstract: Computer teaching in Higher Vocational Colleges in China has made some achievements, but there are also some shortcomings. Based on the study of the current situation of computer teaching in Higher Vocational colleges, the author puts forward various reform measures. According to the research and analysis, computer basic course teaching in higher vocational colleges is an important course to enhance students' comprehensive quality. Only through continuous reform and continuous exploration can we improve the teaching quality and teaching effect of the basic course of computer culture, and cultivate talents with quality and innovative ability for the society.

1. Introduction

With the continuous popularization of computer technology, the application of computers has penetrated into various fields of society and become an indispensable tool for the study, work and life of the public. Computer applications have become an important part of the knowledge structure of college students [1]. Especially in the field of automated office, computers are indispensable, paperless office, video conferencing, online communication, resource sharing, multimedia audio and video, distance education, e-commerce, etc., are inseparable from computers [2]. Each year, the college holds a variety of teacher skill competitions, and selects "teachers" to give great rewards. In most vocational colleges, vocational and technical education is carried out in the mode of "undergraduate compression", and its teaching mode cannot adapt to the needs of higher vocational talents [3-5]. Therefore, computer teaching in higher vocational colleges has changed from professional teaching to basic teaching, and the computer knowledge and application ability of higher vocational students has become an important reflection of the level of personnel training in Higher Vocational Colleges [6]. At present, the employment trend of computer majors in higher vocational colleges is basically focused on the professions of office clerks, archives management, computerized accounting operators, bank counter personnel, etc. [7]. Therefore, the computer teaching reform in higher vocational colleges has very important practical significance [8].

With the rapid development of science and technology in the 21st century, computers have become an important element of life, affecting people's lives all the time. From office, education to entertainment and communication, computers play a huge role [9]. Firstly, as an important discipline in the teaching system, computer teaching is closely related to many disciplines. If the traditional teaching method is adopted, teaching is carried out step by step from easy to difficult and from simple to complex, students will easily feel bored [10]. As a result, in the computer experiment class, the students with good foundation are "not enough to eat" and concentrate on playing games. They are prone to proud and complacent mood, do not study carefully, and even absent from class late and early retirement. Although in classroom teaching, teachers use multimedia teaching methods. However, the mode of screening and demonstration of Java exercises restricts the whole teaching process. The lack of communication and interaction between teachers and students makes the classroom teaching abstract and boring, ignoring the enthusiasm and initiative of students. Especially for the practical application of computer application ability training, the practicality and innovation of teaching content and knowledge structure and the updating of knowledge can not keep up with the development and changes of new technologies. Students lack practical and innovative abilities and lack the ability to adapt to job development.

2. Analysis of the Teaching Status of Computer Basic Courses

At present, the teaching and management concepts of some higher vocational colleges are still relatively backward, and no advanced teaching concepts have been established. Therefore, quickly mastering computer knowledge and easily controlling computer office has become an urgent need of automation office users. First of all, accustomed to instilling in teaching methods, not paying attention to inspiring students' innovative thinking, sometimes ignoring the skills of training students to analyze and solve problems. Due to the use of traditional teaching methods, combined with other courses, the knowledge and skills acquired by students are one-sided and isolated. Such a knowledge structure is difficult to make their specific project operation process in the software industry. Therefore, it is imperative to deepen the reform of computer basic teaching in Higher Vocational colleges. In order to enhance the employability and competitiveness of Higher Vocational graduates, we should attach great importance to the teaching of basic computer courses. Both practical operation and theoretical teaching should be adjusted with the changes of social needs and subject development. Ensure that students' basic computer application ability can keep up with the level of social development and play a role in future jobs. Therefore, higher vocational colleges should improve the curriculum, teaching methods and assessment methods of computer specialty according to the employment situation of graduates and the needs of employers.

According to the survey, most of the students have little interest in computer courses and lack of initiative. The main reason for this situation is the lack of innovation in teaching methods. The specific data are shown in Table 1.

Table 1 An Analysis of the Reasons for the Low Interest of Students in Computer Course in Three Grades of Higher Vocational Colleges

Reasons for learning weariness	First grade (%)	Second grade (%)	Third grade (%)
Single teaching method	48	42	51
The course itself is dull	36	17	26
Not interested in oneself	13	26	18
Other	3	25	5

Computer basic course is a compulsory course set up in Higher Vocational colleges. According to the functions and characteristics of Higher Vocational colleges, the teaching of this course mainly focuses on improving students' practical ability of computer operation, taking into account the teaching and learning of theoretical knowledge. Only a few students have a solid knowledge of computer science and a certain ability of program development. They can be engaged in software development in IT industry. Because of the unbalanced economic development between regions and cities and rural areas, the investment of computer equipment funds in middle schools is unbalanced, and there is a certain gap in the development of teachers. Therefore, how to stimulate students' interest in learning, improve their practical ability, and enhance the comprehensive ability of independent analysis, thinking and evaluation projects has become an important topic of our research. The students with poor foundations feel that they are struggling to learn, lack self-confidence, and have no interest in learning. Most of the students in economically developed areas are more proficient in computer operations, and individual students have obtained computer grade certificates at the secondary level. However, in many higher vocational colleges, the mode of computer teaching is still based on the teaching of teachers. The passive listening of students, coupled with the large amount of information and speed, is difficult to stimulate students' interest in learning, which seriously affects the students' positive behavior. The development of initiative and innovation.

3. The Significance and Method of Computer Teaching Reform

Higher vocational colleges should strengthen the cultivation of students' practical operation ability according to the needs of society and the specialties offered so as to enable students to

become technicians adapting to social development. The traditional assessment methods of basic computer courses are usually given by the teachers in class. They can take whatever they teach in class, and even many schools are continuing the paper-based examination forms. Secondly, the requirements of students' experiments are not strictly managed, including the selection and organization of experimental contents, teaching students in accordance with their aptitude in the experiment, the examination and assessment of experimental results, etc. Students are not motivated when they go to the computer for experiments. In teaching, we give students an application project in advance, and according to the progress of the course, students are required to complete the tasks of the corresponding stage according to what they have learned, and to cooperate with the necessary practical operation and design, so that students can complete the whole course teaching at the same time of the final completion of the project. At the same time, due to the influence of the "high school entrance examination" in the high school exam-oriented education, the information technology curriculum has not received attention, so the computer knowledge level of college freshmen is quite different. For example, students in the eastern economically developed provinces have a basic knowledge of computer basics, but students from remote and impoverished provinces in the west do not even have computer switches.

The construction of the teaching staff directly affects the quality and development prospects of colleges and universities. The analysis of the teaching staff of the computer basic course teaching staff in the past two years is shown in Table 2.

Table 2 2016~2018 Computer Basic Course Teaching Staff Status Table

Age	Number	Title	Number	Education	Number
Over 50 years old	9	Professor	6	Doctor	3
40 years old, ~50 years old.	7	Associate professor	7	Master	8
Under 40 years old	4	Lecturer	7	Undergraduate	9

Computer basic course is a public compulsory course set up by higher vocational colleges to meet the needs of social development. All professional students are required to learn and operate computer basic knowledge. And it should also reach a certain level, that is, students should have basic word processing ability, data processing ability, information processing ability and so on after basic computer knowledge learning. The vast majority of non-IT organizations need not professional programmers, but compound talents who can skillfully operate various office software or application software. That is to say, besides mastering computer knowledge, the employer pays more attention to whether it has other professional knowledge and whether it has the office ability to work with the help of computer practice. As the main body of learning, students only passively accept what teachers say, and there is no interaction with teachers. Teachers only want to complete teaching tasks, so that teaching is purely exam-oriented education. The difficulty of the project should be moderate. Students should be able to organize and arrange their own learning behavior under certain conditions. In this process, the teacher should let the students solve any difficulties encountered in the project. On the other hand, it establishes an evaluation system that promotes the continuous improvement of teachers. Teachers should insist on the analysis and reflection of their own teaching behaviors, and combine student evaluation, colleague evaluation and self-evaluation to improve the teaching level.

The informationization of society puts forward higher requirements for the information literacy of college students, and learns the search and collection of common information. Can effectively cultivate students' information literacy. The reference course and course content are shown in Table 3.

Table 3 Reference Scheme for Two Compulsory Courses

Course type	Reference courses	Course content	Class hour	Credit
Foundation class	Computer Foundation, etc.	Including computer hardware structure	36	3
Information Retrieval Classification	Information Literacy and Information Retrieval	Including information literacy overview, information selection,	24	2

4. Conclusion

The computer teaching in higher vocational colleges is based on cultivating practical talents. We should continue to accumulate and sum up experience in practical teaching, explore suitable teaching methods, fully reflect the practicability and advancement of the curriculum, and highlight the hands-on operation of students. The cultivation of abilities and continuous improvement of students' innovative ability to meet the needs of social development for talents. In the principle of "practical, open, and professional", teachers must go out of the teaching materials, walk out of the classroom, walk out of the school, and go deep into society and enterprises. Understand what kind of talents enterprises need most, so as to develop their own teaching tasks, connect the curriculum system to the requirements of the post, connect the teaching tasks with the tasks, and teach with the task. In the whole teaching activity, students are in an atmosphere of free discussion, through self-determination and cooperation, to explore ways to solve problems, so that students can not only master knowledge points, but also cultivate students' ability to standardize coding and team development. At the same time, the textbook reform should be positioned accurately, pay attention to the training of students' practical ability, and strive to provide zero-docking computer application-oriented talents for the society. With the support of teaching resources, it promotes the continuous improvement of computer teaching effect.

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