Exploration of Computer Teaching Mode in Universities under the Background of Informatization

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Abstract: In the context of the continuous development of social economy, interest assessment technology has gradually integrated into People's Daily life, in the university computing, information technology has gradually integrated into People's Daily life, in the university computer software is also the same. This paper adopts the multi-task-driven teaching model to carry out the research, divides the objects of the survey into the experimental class and the control class for comparison, and evaluates the students' knowledge skills and knowledge abilities. The experimental data show that the proficiency level of all knowledge points in the experimental class is higher than that in the control class, and the use of "task-driven" teaching method can effectively improve the students' mastery level of all knowledge points. Experimental results show that the experimental class and control class written test scores are: 76.873, 73.086, the work achievement were 78.238, 62.832, so through the experimental research, found that after using multiple task driven teaching mode, students' written test score difference was not significant, theoretical knowledge increase of experimental classes are not obvious, but the result is very significant difference.

1. Introduction

Today, with the rapid development of information technology, all kinds of advanced technologies are also making continuous progress on this basis, which has brought great improvement to our life [1-2]. For colleges and universities, the rapid development of information technology is also a great challenge [3]. Although the high-tech information technology makes the school teaching full of passion and challenge, the traditional computer teaching method is difficult to change, so it is difficult to let the computer course into our teaching, so it is necessary to reform the computer course in colleges and universities [4].

Shankararaman et al. argue that from the perspective of college students' information literacy education and constructivist learning theory, and based on the current situation of computer public courses in Chinese universities, the effectiveness and implementation principles of using "task-driven and group learning mode" in computer public course teaching are analyzed and demonstrated [5]. Chuang, people believe that computer teaching mode is a new, dynamic course, although in practice, most of the teaching mode is still in grope and try stage, but for how to improve the effectiveness of the teaching mode, there is a big space, is worth us each college computer teachers to explore and to [6].

The computer course in colleges and universities is aimed at improving the electronic technology level of college students. As a basic course, although it is not a major course, it is also a key one [7-8]. Through analysis and practical teaching experience, we can well see that there are big problems in current computer teaching [9]. Therefore, the research object of this paper is the computer teaching mode in colleges and universities. The traditional teaching methods are firstly analyzed in combination with the current scientific and technological achievements, and the deficiencies and disadvantages are obtained, and the teaching methods and measures of computer in colleges and universities are proposed [10].

2. Exploring and Researching on Computer Teaching Mode in Colleges and Universities

under the Background of Informationization

2.1. Current Situation of Computer Education Reform in Colleges and Universities under the Background of Informatization

Problems of traditional teaching of computer from largely limits the institutions of higher learning in computer teaching and students' computer level ascension, although most of the students has a strong ability of computer self-study, but should be for all the student to carry on the system of colleges and universities, the comprehensive teaching, otherwise it will make the traditional computer course is difficult to play a role, even have a negative effect of teaching.

(1) The textbooks are relatively backward, and there are no corresponding practical cases to help

In the context of information development, although the computer technology is changing with each passing day, there are still many problems in the computer teaching courses in colleges and universities. For example, the teaching content is rigid and unitary, and the content in the book cannot present many case teaching. So students in the classroom can not focus on learning, over time to learn to produce fidgeting quickly put. It is difficult for students to make good use of the knowledge they have learned, and their learning goals are not clear. They only learn the rigid knowledge from books, and they cannot mobilize their interest and initiative in learning. Many universities' teaching results are not optimistic and cannot achieve the corresponding goals.

(2) Placing too much emphasis on theory and too little on practice

At present, computer teachers do not pay enough attention to computer courses, and the school's class schedule is also very small, and the teaching is often attached importance to theory rather than practical operation, so it is difficult to improve students' technology. For computer teaching, we must pay attention to let the student in field and increase a certain course of time, only time is up, can make learning not only in the "paper", more practical technology to teach students, let students could use the computer and their professional class, the combination of better learning. In addition, in recent years, China is also vigorously promoting the new curriculum reform, computer practice teaching is more and more attention, because if only rely on theory is difficult to cultivate high-quality computer talents and ensure that all students timely adapt to the changes of the new era, comprehensive development.

(3) Teaching is not innovative enough to attract students

From the current situation of the actual implementation of computer teaching work in colleges and universities, the emphasis on computer teaching innovation is insufficient, which makes the computer teaching mode relatively single and backward, unable to make students have the interest of learning, and even has produced the psychology of boredom.

2.2. Direction of Computer Education Reform in Colleges and Universities under the Informatization Background

It is an urgent problem to carry out computer teaching reform and improve the traditional teaching methods, and it is also an inevitable requirement to adapt to the development of The Times under the information background. The author thinks that Chinese universities should carry out computer teaching reform from the following directions

(1) The high-quality application of information-based teaching means

Successfully completed the first step of computer teaching reform is to use the informationization teaching technology and equipment, because the computer professional is a little a lot, especially it can connect with information technology, information technology development is based on the computer, so the school can vigorously promoting informationization teaching mode in teaching and auxiliary equipment based on the information environment.

(2) The scientific transformation of teachers' teaching concept

The traditional teaching concept obviously cannot be compared with the modern information technology, so the teaching of computer in colleges and universities must be reformed as soon as possible to follow the footsteps of the information age. At the same time, it should be noted that the quality of students is also very important to their learning career. We should not only pay attention

to knowledge teaching, but also pay attention to the practical ability and quality of students.

(3) Scientific construction of curriculum system

The construction of scientific curriculum system is the basis of implementing the teaching reform. The traditional teaching system structure is relatively simple and focuses on the imparts of theoretical knowledge rather than the cultivation of students' practical ability and comprehensive quality. To make up for the deficiency of the traditional curriculum system and to build a scientific and reasonable curriculum system is an urgent problem at present. In the new curriculum system, cultivating students' comprehensive quality is the ultimate teaching goal.

2.3. Strategies for Improving Computer Teaching Mode in Colleges and Universities in the Context of Informatization

(1) Determine the objectives of computer teaching in colleges and universities

In the context of information technology, the improvement of teaching mode in colleges and universities needs to pay attention to the following problems:

1) It is necessary to do a good job in the basic teaching of computer knowledge, because the work of basic teaching is particularly important. At the same time, it is very critical in the learning career of students, because the practice can only be carried out based on a solid theoretical foundation.

2) To enhance the level of students' computer application practice, so as to lay a foundation for future practical teaching.

(2) To develop a sound computer teaching system

In the teaching of computer, whether the system is good or not is very important, which contributes to the combination of theory and practice. So to carry out the computer teaching reform, we must first carry out the reform of the computer system, improve. A set of scientific and efficient system of computer teaching, to reform the computer better, so the school more effort and give enough support to yourself and let the teachers and students are actively into the innovation of the computer teaching, and organization of teachers training for many times, let the students and teachers can be very good for teaching.

(3) The update of computer teaching faculty

At present, in the computer teaching in colleges and universities, although the old teachers have made great contributions to computer teaching, but in the context of the rapid development of information, the old teachers themselves have mastered the knowledge points and the use of teaching methods have been inconsistent with the current requirements of computer teaching in colleges and universities. In the process of computer teaching, colleges and universities should not simply rely on old teachers, but should increase the introduction of new teachers and training and other related work, so as to provide a certain strength for computer teaching in colleges and universities.

3. Exploring and Researching on Computer Teaching Mode in Colleges and Universities under the Background of Informationization

3.1. Experimental Subjects

This paper chooses Class A and Class B of two local universities as the research objects, and divides them into experimental class and control class. Both of these two classes have taken relevant exams when they were enrolled, and their results are similar. Moreover, their majors are both computer science. Through the analysis of various data of the final exam scores of last semester, the two classes have similar basic computer knowledge, and the grades of the scores are also quite similar.

3.2. Application of Task-Driven Teaching Mode

In the learning process of students, through interviews with students and re-learning of literature materials, the experiment decided to adopt the multi-task-driven teaching mode according to the

characteristics of students' different levels and different abilities to accept knowledge, which should not only consider the overall characteristics of students' learning, but also consider the individual differences of students. Multi-tasking mainly refers to the occurrence of multi-layer tasks in a teaching activity, forming the situation of successive and progressive levels. In the preparation stage, through the investigation of students' information technology level and the collection of relevant data, the students' information technology ability is analyzed and evaluated. Then, according to the teaching materials and students' level, the key points and difficulties of teaching are predicted. Then, teachers study and discuss carefully to form the teaching design. In the end, teachers design multi-layered tasks according to the teaching components and create their own task situations.

4. Exploration and Discussion of Computer Teaching Mode in Colleges and Universities under the Background of Informationization

(1) Let's look at the following after a semester of learning, the two classes of PowerPoint learning effect assessment. The semester examination is divided into two parts: written examination and work evaluation. The proportion is 60% for written examination and 40% for works. The written test adopts the closed-book test, and the assessment content is theoretical knowledge content. Since the same teacher teaches, the review content is exactly the same. The assessment form of the work is to show and report the work and evaluate the students' performance. In a word, evaluation should not only evaluate students' knowledge and skills, but also their abilities. The test results are shown in Figure 1 and Table 1:

Table 1. Comparison of exam results

| Assessment form	class	N	X
Written examination	Experimental class	45	76.873
	Control class	47	73.086
Works	Experimental class	45	78.238
	Control class	47	62.823
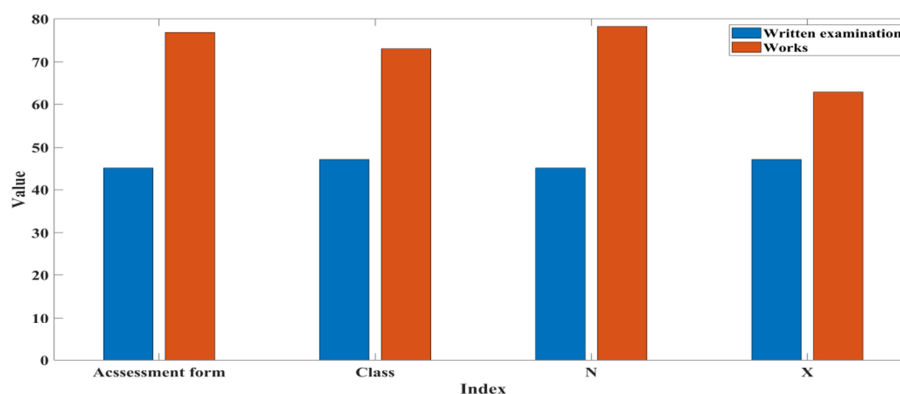
Figure 1. Comparison of exam results

(2) Students make full use of what they have learned and use the Internet to collect materials (including text, pictures, sound, etc.) to make presentations from various angles. Through personal self-evaluation and mutual evaluation by groups, students further strengthen the mastery of each operation skill of PowerPoint software. First we make presentations given by behind the evaluation gauge table to obtain the following data, we can see from the table and experimental classes of three

knowledge master degree reached 100%, 100%, 97.9%, and the control class two knowledge master degree reached 100%, 100%, 88.9%, the rest of the knowledge mastering degree: experimental classes > control class. Therefore, the use of "task-driven" teaching method can effectively improve students' mastery of various knowledge points. Specific data are shown in Table 2 and Figure 2.

Table 2. Evaluation form for making presentation

Knowledge points	Will not operate		Basic operation		Number of skilled operators		Proficiency	
	Experimental class	Control class	Experimental class	Control class	Experimental class	Control class	Experimental class	Control class
Create a presentation	0	0	0	0	47	45	100%	100%
Save the presentation	0	0	0	0	47	45	100%	100%
Make a title slide	0	3	1	2	47	45	97.9%	88.9%
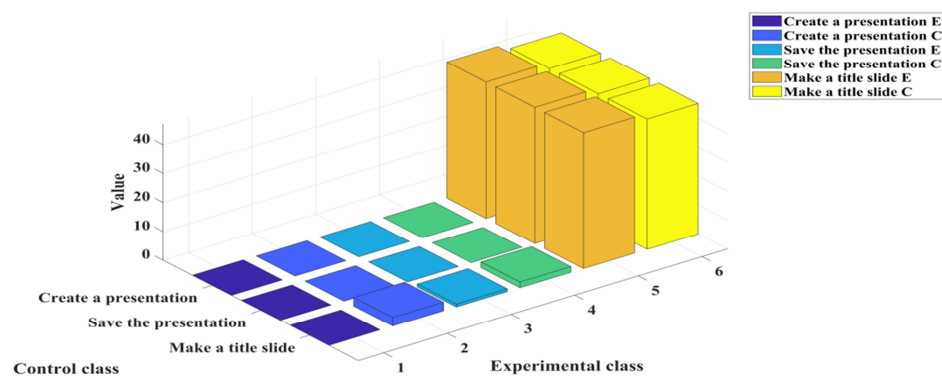
Figure 2. Evaluation form for making presentation

5. Conclusion

This paper analyzes the problems existing in the basic computer teaching in colleges and universities, and establishes the basic computer teaching mode suitable for the present situation of the university by combining the background of informationization with the actual situation of the university. In this experiment, the subjects were divided into the experimental class and the comparison class by adopting the multi-task driven teaching mode. The written test scores of the experimental class and the control class were 76.873 and 73.086 respectively, and the work scores were 78.238 and 62.832 respectively. This paper probes into some concrete measures for the reform of computer teaching in colleges and universities, hoping to provide some references for the reform of computer teaching in colleges and universities in China.

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