The Application of Computer-aided Teaching in the Ideological and Political Construction of College Students

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Abstract: The new media environment based on computer technology is a comprehensive challenge to the ideological and political education in colleges and universities. It not only directly targets the critical content of ideological and political education in colleges and universities, but also changes our way of thinking and values. It also affects the dissemination, planning and dissemination of ideological and political knowledge in colleges and universities. This project aims to explore the application of computer-aided learning in the political construction of science students. Variable control methods were used to control for the impact of low-impact learning on student performance. The main operation steps are as follows: the first step is to divide the ordinary class and the key class into two groups, A and B. The computer-aided teaching method is adopted in the A group, and the traditional teaching method is adopted in the B group. The same course content is taught and the same in-class test is conducted; the third step is to use the paired sample T test to compare whether there is a significant difference in the test scores of the A and B groups, and judge whether the computer-aided teaching can improve the students according to the difference results. ideological and political achievements. The experimental results show that the average grade of class A is above 7.8.

1. Introduction

A student's political education must continue to evolve and evolve with social, political, and cultural changes. Every social, economic and cultural advance will have a new impact on the students [1-2]. To do a good job of students' scientific and political work, we must find effective and feasible ways to make students' ideological and political education keep pace with the times. To do a good job, we must achieve success through specific and effective ideological and political education [3]. With the rapid development of social economy, new technologies represented by mobile Internet technology continue to emerge. At the same time, the opportunities and challenges

faced by students majoring in ideology and politics have also undergone major changes. The tone and characteristics of ideological and political culture in educational institutions cannot meet the needs of ideological [4].

The application of computer-assisted learning in higher education has become common [5]. Wishnowski LA reviewed a case study of a self-administered online course to assess the most preferred use of non-academic training services by students and staff. Combine training with personal scripts and video templates. A total of six high school students and four staff members were assessed for training using a multidisciplinary design. Overall, students progressed from a base GPA of 35% to an average of 94% after training, and employees improved from an average of 23% baseline accuracy to an average of 87% post-training accuracy [6]. In the history of the use of computers of all kinds in education, triumphalist claims about the inevitable automation of teaching and equally frequent claims of failure of the project have emerged. Crooks R places these two types of claims in a broader cultural understanding, arguing that the human world is fundamentally information-based and thus can be improved by computers [7]. Digital learning has become a factor in an important development in education.

One of the innovations of this paper is: "The application of computer-assisted learning in college psychology and political science can solve the problem of students' barriers in school, and the lack of knowledge can also help to promote practical learning, so that college students can broaden their horizons, teachers and students Learn from each other and promote further exchanges between teachers and students. Pay attention to human behavior, culture and political reform, and further strengthen "cultivating skill builders and socialist cause reliable" successor" goal.

2. Research on the Application of Computer-aided Teaching in the Ideological and Political Construction of College Students

2.1 Computer Assisted Instruction Technology

(1) B/S model structure

The biggest feature of B/S mode is that users can access pictures, text, data, animations, custom video and audio information on WWW browsers [8-9]. This information is generated by multiple web servers and each web server, it can also be connected to the data server in many ways, and a lot of data is actually stored on the data server.

It can work anywhere without installing any special software, which is the biggest advantage of B/S. If the computer comes with Internet access, you can use it. Expanding the system is very simple, the use of B/S system increases, especially the on-demand development of AJAX technology, and the system can also be partially improved on the client computer, thereby greatly reducing the burden on the server [10-11].

(2) JSP technology

JSP decouples web design techniques from web design and perspective, supports data-intensive design [12]. Typically, HTML text is returned to the client, so as long as there is a browser, the client can browse the web.

(3) MySQL database

The MySQL database system uses Query Query Language (SQL), the most common data management language, to manage the database.

2.2 The Ideological and Political Education of College Students

Education work mainly includes two levels of theoretical research and practical activities. It mainly includes two contents: First, from the perspective of internal concept, it takes the group, through a certain carrier form, theoretically and practically, in order to make college students form in line with the requirements of national and social development, and college students. It is an ideological and political education theory and practice activity that matches its own development needs, specific ideological and political views, moral qualities, and practical behaviors. Second, from the extension point of view, it includes multi-level content such as "three views" education, moral education, moral behavior education, and psychological quality education for college students.

3. Investigation and Research on the Application of Computer-aided Teaching in the Ideological and Political Construction of College Students

3.1 System Development Environment

The database server and application server environment required for the development and operation of the online teaching system developed in this paper are as follows:
(1) Database server
Processor: Intel processor or faster processor, the recommended processor speed is 3.0GHz or faster.
Memory: Minimum 32G.
Hard Disk: Minimum 500GB.
Operating system: WindowsServer2013sp2Standard.
Database: SQLServer2012.
Browser: Microsoft Internet Explorer 8SP1 or higher.
(2) Application server
Processor: Intel processor or faster processor, the recommended processor speed is 3.0GHz or faster.
Memory: Minimum 32G.
Hard Disk: Minimum 300GB.
Operating system: Windows Server 2013.
Browser: Microsoft Internet Explorer 8SP1 or higher.

3.2 System Structure

The system adopts a architecture; adopts B/S architecture, no installation is required on the student side; fully considers the system upgrade and scalability requirements. The construction of Maojian's online teaching system should enable users to access multiple types of information using a single portal. No matter where the information is stored, no matter what the format of the information is, as long as the information is accessible and analyzable, the system can collect and display the information in a personalized way according to the user's attention, forming the information portal of the system , to achieve information sharing. According to Mao Gai's teaching goals, we will carry out unified image design of the website. Based on the principle of "simplicity, atmosphere and fashion", we systematically conceive and design the website image.

3.3 Data Entry and Data Analysis

In order to test the performance of computer-aided teaching in high school ideological and political courses (that is, to test the impact of computer-aided teaching on students' academic

performance), the author selected two classes in each of the "normal classes" and "key classes" in the sample survey (each class 20 people), a total of 80 people conducted comparative teaching experiments. The operation steps are summarized as follows: Step 1: Divide the general class into two groups of "general A" and "general B", and divide the key class into two groups of "heavy A" and "heavy B"; , Implement computer-aided teaching (in the classroom) with emphasis on A, and maintain traditional teaching methods for general B and emphasis B; the third step: carry out a classroom test, and verify the effect of computer-assisted teaching on students' cognitive ability through the "paired sample T test" of the scores. effect (verified by the difference in the mean scores obtained by the test).

All information was quantitatively analyzed, and SPSS (version 19.0) statistical analysis software was used for relevant data processing. The main data analysis techniques used were descriptive statistics. The t-test formula used in this paper is as follows:

$$t = \frac{\overline{X} - \mu}{\frac{\sigma X}{\sqrt{n}}} \tag{1}$$

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{\frac{(n_1 - 1)S_1^2 + (n_2 - 1)S_2^2}{n_1 + n_2 - 2}(\frac{1}{n_1} + \frac{1}{n_2})}} \tag{2}$$

Where X is the sample mean, s is the sample standard deviation.

4. Analysis and Research on the Application of Computer-aided Teaching in the Ideological and Political Construction of College Students

4.1 Online Teaching System

Course slideshow management function: report the teacher's course slideshow: add the slides corresponding to each chapter of the gross overview course to the system, including the time of the course slideshow, the title of the course slideshow, the content of the course slideshow, and the report of the course slideshow Introduction to people, course slides, etc. Temporarily save course slides: After the teacher can edit the course slides, they will not be reported for the time being, but will be saved to the local database.

Course feedback management function: Students can send questions to the teacher after class, and the teacher will reply after seeing the question, but also facilitate the efficiency of communication. It is a very useful online teaching system. important function.

Curriculum test question management function: The function involved in the course test question management is mainly to investigate the test questions of a specific chapter in the Mao overview teaching. The functions of course test question management design include: course test question reporting: the teacher adds course test questions to the system, including the name of the course test question, the start time of the course test question, the content of the course test question, the score setting of the course test question, and the end time of the course test question, etc. Writing course test questions: The teacher writes the course test questions through the system, and can save them in the local database. As long as the course test questions are not reported, the teacher can edit them. Modify course test questions: The teacher can select a course test question in the system, then modify a field of the course test question, and finally modify the data recorded in the database.

Through the setting of the role module, only the teacher in this module can maintain the information of the course test questions in the system, and the study can query the course test question information. The main functional modules of course test question management are shown in Figure 1.
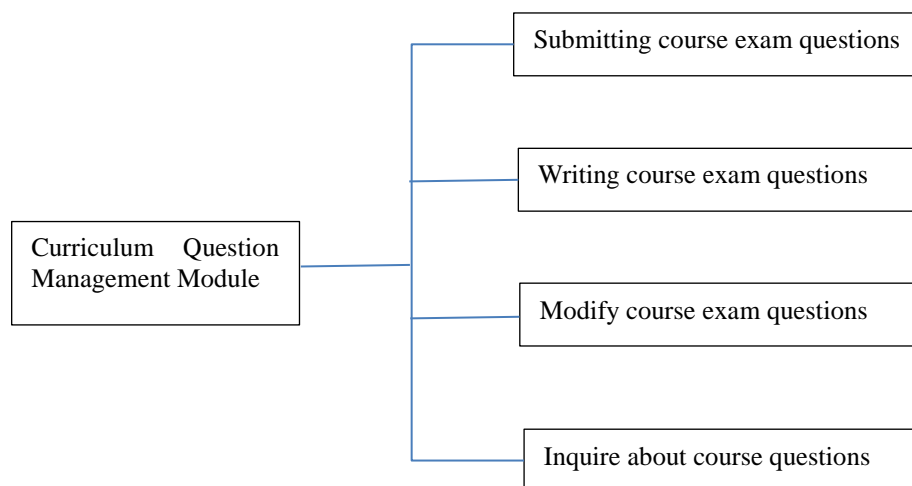
Figure 1: Module diagram of course test question management

Online discussion function: mainly for online discussion of teachers in Maojian teaching. The functions of the online discussion management design are: Open the discussion area: The teacher can open the discussion area during the teaching process, and all students can see the discussion area and interact directly. Close the discussion area: The teacher can close the discussion area after Mao's teaching is completed. Answering questions: The teacher can view the questions posted by the students in real time and answer the questions immediately. Post discussion: Students can post their own questions and understanding of the course in the discussion area, and students and teachers can interact in time.

4.2 Statistical Results of Performance Dimensions Survey

The average score of group A computer-aided teaching is 7.85, and the average score of the ordinary class B in the traditional teaching is 6.08, as shown in Table 1, and key class B in the traditional teaching is 7.63, as shown in Figure 2. Judging from the average value of the test data, ordinary class B < ordinary class A, and key class B < key class A. Assuming the significance level α=0.05, the P value of ordinary class A and ordinary class B is 0.040, and the P value of key class A and key class B is 0.037, that is, in the 95% confidence interval condition Because the bilateral probability P of group A and group B is less than 0.05, there is a significant difference in the average scores of ordinary class A using computer-assisted teaching and ordinary class B using traditional teaching. Similarly, the key class A using computer-assisted teaching There is a significant difference with the average grade of the traditional teaching key class B.

Table 1: The average value of the test scores of the ordinary class and the experimental class in the classroom

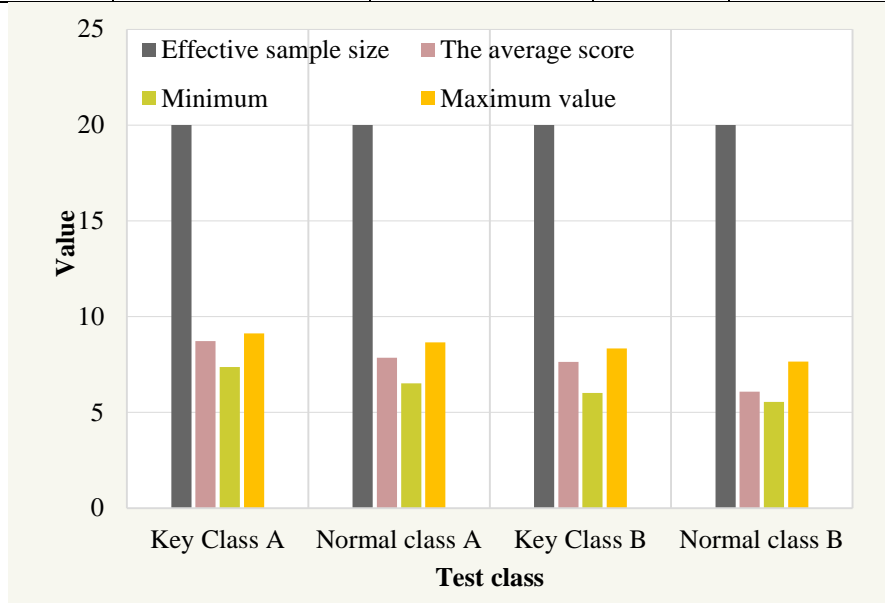| Test class	Effective sample size	The average score	Minimum	Maximum value
Key Class A	20	8.72	7.36	9.12
Normal class A	20	7.85	6.52	8.66
Key Class B	20	7.63	6.01	8.34
Normal class B	20	6.08	5.55	7.65

Figure 2: The average test scores of the ordinary class and the experimental class in the classroom

Therefore, in terms of specific scores, the average score of group B is lower than that of group A, and the academic performance of students under computer-assisted teaching is better than that of traditional teaching methods.

5.Conclusions

Education informatization is a very important part of informatization. The talents with noble ideology and morality rely on high-quality. Educational informatization is the foundation and premise of social development. The system in middle schools has promoted the orderly progress of lifelong learning of the whole nation. This article attempts to explain related technologies from the point of view of computer technology. Discuss the profound impact of computer-aided education on the thinking concept, life style and learning atmosphere of college students today, starting from the challenges and opportunities brought by college education and the political system, analyzes the existing problems, how to effectively use computer technology to provide information sources, dissemination methods. And how to innovate and develop ideas of university policy and politics under computer-aided education.

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