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The Application of Internet of Things Technology Under Computer-Aided Technology in the Evaluation of College Chinese Teaching

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Abstract. The evaluation of computer-aided teaching is the measurement, analysis and evaluation of the educational value and process of computer-aided teaching. Compared with the traditional Chinese teaching evaluation mode, the application of computer-aided technology in Chinese teaching has unparalleled advantages. In recent years, despite the great development of computer-aided teaching software, it still cannot meet the actual teaching needs. Therefore, this paper studies the design of the evaluation system of college Chinese teaching based on computer-aided technology, including the design of formative evaluation and summative evaluation. In the formative evaluation, the case designed the "electronic file" and the standard example of the information-based teaching evaluation, and completed the computer realization of the formative evaluation. In the summative evaluation, an "online test system" was developed. The system utilizes network and database technology and is researched and developed based on the client/server mode, which realizes the entry and browsing of test questions, random selection of questions and automatic scoring.

Keywords: Computer Aided; Teaching Evaluation; College Chinese
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1 INTRODUCTION

In the traditional college Chinese teaching, the most common method is to use the method of teachers' teaching and students' memorization. Lin [1] considers that in this teaching mode, not only is there a lack of communication between students and teachers, but also students' mastery of knowledge is not ideal. However, since the beginning of the computer, it has played an important role in enriching the form and content of knowledge. Now, with the gradual maturity of computer technology, it has more novel methods for knowledge processing and processing, providing more diverse forms of knowledge display. Especially in the Chinese subject, Chinese text is a colorful and diverse subject, including music, drama, literature and other forms. With the

application of computer technology in Chinese teaching, teachers can use images, audio, animation, video and other methods for teaching, which greatly expands the options of teaching methods and brings a new look to Chinese teaching. Wang [2] thinks that to a certain extent, it enriches students' learning methods, broadens their horizons, and improves teaching efficiency. College Chinese classroom teaching is the most basic teaching form of school education. With the help of computer-aided technology, through the comprehensive processing of text, graphics, images, animations and sounds and other information, computer-aided education and teaching with pictures, texts and sounds are realized, which greatly simplifies. Su [3] thinks that it can improve the operation of teachers, so that teachers can concentrate on teaching itself, which also improves the teaching effect of college Chinese classroom education. Therefore, compared with the traditional education and teaching mode, the computer-aided education and teaching carried out by college Chinese teachers has unparalleled advantages.

Wu and Rani [4] think with the deepening of college Chinese education and teaching reform, the two major theories, constructivism theory and multiple intelligence theory, provide a theoretical basis for scientific evaluation and play a strong guiding role in the development of teaching activities. Under such a theoretical background, "process evaluation" has been paid attention and developed by people. The evaluation conducted in order to successfully achieve the expected purpose" is more conducive to the overall development of students. The traditional summative assessment is questioned because it cannot evaluate students comprehensively. Since developmental evaluation is a new educational concept that integrates process evaluation and multivariate evaluation, there must be new requirements for teachers' quality, teaching environment, teaching tools, and evaluation methods. Adapt the teaching evaluation model and evaluation method to transform. From the perspective of evaluation methods, teaching evaluation is divided into three categories: quantitative evaluation, qualitative evaluation and semi-structured quantitative and qualitative combination. At present, there are five forms of teaching evaluation: (1) qualitative evaluation method; (2) quantitative evaluation method; (3) evaluation method based on quantitative evaluation and supplemented by qualitative evaluation; (4) qualitative evaluation; (5) The mutual support of qualitative evaluation and its balance.

Liu et al. [5] consider that the evaluation of computer-aided teaching is to measure, analyze and evaluate the educational value and process of computer-aided teaching. Computer-aided teaching evaluation focuses on judging the advantages and disadvantages, potential and development direction of computer-aided teaching, improving the use value of courseware, improving the teaching environment and making up for the shortcomings of general classroom teaching, improving the enthusiasm of students to actively participate in the teaching process, and cultivating students' innovative spirit and creativity, etc. In addition, computer-aided teaching evaluation is an information feedback mechanism for obtaining information, finding deficiencies and overcorrecting. The use of evaluation methods can explore the lack of operation of computer-aided teaching, effectively adjust the process of computer-aided teaching, which is conducive to the in-depth development of computer-aided teaching. The evaluation of computer-aided teaching can compare the computer-aided teaching with general classroom teaching to make the role and effect of computer-aided teaching more fully, and then promote the school to give priority to increasing the cost of computer facilities and courseware development when improving school conditions and increasing teaching investment, so that computer-aided teaching can accelerate the pace of development.

Over the years, although the computer-aided teaching software has been greatly developed, it still cannot meet the actual teaching needs. The main reasons are: 1. There is no fixed method in teaching. Even if the teaching content is the same, the teaching styles of different teachers are not the same, which reflects the flexibility and creativity of teaching. 2. Auxiliary software development capabilities are mixed. Most of the software is designed and produced by non-teaching staff, and the developed system cannot meet the actual needs of teaching. 3. Poor flexibility, commercial auxiliary software often cannot be modified or re-developed when it is not suitable for teaching, it is difficult to adapt to the needs of the development of new courses, and some even violate the teaching rules [6-7].

All in all, computer-assisted teaching evaluation can help teachers to clearly grasp the problems existing in practical teaching and adjust teaching strategies accordingly, so as to improve the quality of teaching [8]. Therefore, teaching evaluation is an indispensable and important part of teaching, and it is the basic guarantee for continuous improvement and perfection of teaching. At the same time, whether a teaching mode is feasible or not requires not only the verification of time, but also the analysis and evaluation of it in a suitable way. Questions such as whether smart teaching meets the needs of social development and whether it will be marginalized after a period of time are not only questions of theoretical research, but also the proper meaning of the field of teaching evaluation research. Therefore, in response to the urgent needs of the positive development of smart teaching, systematic and scientific evaluation of smart teaching activities is a necessary guarantee for the effective development of smart teaching [9-10].

At present, computer-aided education technology has been widely used in college Chinese teaching, and it can be used in various forms. It can fully mobilize students' vision, hearing, and enthusiasm for learning, cultivate students' interest in Chinese, and achieve a certain degree of success. effectiveness. However, while affirming the effectiveness of the use of computer-aided technology in Chinese teaching, we also see that there are still certain deficiencies in the application of computer-aided technology in Chinese teaching: the use of computer-aided technology is a mere formality, and the use is unreasonable; computer-aided technology of mechanical use, neglecting the integration of computer-aided technology with traditional teaching. Therefore, we must follow the use of computer-aided technology according to actual needs, pay attention to cultivating students' ability to think independently and learn independently, and follow the teaching integration with traditional models.

2 EVALUATION OF COLLEGE CHINESE TEACHING BASED ON COMPUTER AIDED TECHNOLOGY

In the traditional Chinese evaluation mode, the evaluation mode of students' learning effect occupies the main body. In today's social conditions, although the test of learning effect can reflect students' problems in the learning process to a certain extent, it is not conducive to students' learning enthusiasm. improvement. Therefore, in the context of the modern development of the Internet, we should pay more attention to the development evaluation of students, so that students can be as reasonable as possible when setting learning goals, in line with their own problems. In the process of learning evaluation, one should reduce the overall proportion of summative evaluations and increase the proportion of process evaluations, so that students understand that not only grades are important, but also the ability accumulated in the learning process and the cultivation of moral quality are important more important. Therefore, at this point, the online teaching platform can display data more intuitively, objectively and reasonably, and can also help teachers make judgments. Then teachers must play a guiding role in the evaluation process, conduct detailed communication with students, let more teachers participate in the evaluation, let more students also participate in the evaluation, be the master of the evaluation, and reverse the students' concept, so that students understand that learning is for their own ability to learn is to continuously improve in the process, from focusing on results to focusing on the process.

Under the computer-aided technology, the evaluation of college Chinese teaching can take a combination of different evaluation methods to evaluate teachers and students. For example, teacher evaluation can take various forms such as open lectures in the classroom and teaching and research activities. Through the self-evaluation of teachers, students' scoring and mutual evaluation of teachers in the lesson preparation group, and senior leaders' teaching of open classes and lectures in the classroom The evaluation consists of four parts, so that teachers can be urged to prepare high-quality lectures with high quality, and lay a solid foundation for students' learning. In this way of student evaluation, students can be evaluated based on their attendance, classroom performance and their own oral expression skills, or It is a practical and comprehensive evaluation score based on the innovative application of online learning time content, which can

account for a larger proportion of the score in terms of ability, so that students can promote the change of their own shortcomings through scientific and rational and more diversified evaluation methods and discover their own Inadequate, to promote their own improvement, to enrich students' school life.

Computer-aided teaching evaluation should include the following principles. (1) The principle of scientificity (or objectivity). It means that the evaluation method, the selection of evaluation elements, the design of evaluation indicators, the organization of the evaluation process, and the treatment of evaluation results must be objective, accurate, and realistic, so that the evaluation can point to the final purpose. (2) Developmental (or goal-oriented) principles. Computer-aided teaching is still in the period of development, rise and improvement. It is inappropriate to measure and evaluate computer-aided teaching with too ideal and all-round standards. Before evaluating, we should formulate expectations according to the expected goals. The goal should not be too low or unattainable. We should look at it from a predictive point of view and a developmental perspective. (3) The principle of practicality (or operability). The evaluation method should have strong operability, and use computer means as much as possible to complete and generate conclusions through evaluation procedures.

As a result, this paper develops a "teaching online test system". Students practice and test online interactively. The system provides intelligent feedback and realizes human-computer interactive learning. The introduction of this system is as follows:

1. Student login module

The student login interface, where the student's admission ticket number and ID number can be entered. After the student clicks OK, the system will check the admission ticket and ID number entered by the student with the admission ticket number and ID number in the database. If the check is successful, go to the corresponding page and store the student id.

2. Exam description module

This is the description page of the exam. This page extracts the student id. After entering this page, first use this student number to judge the student's status. If the status is "dropped", it will display "you just dropped the line" to allow students to continue the test just now, click OK and go directly to the test paper page. If the status is "Exam not allowed", it says "You have already taken the exam or do not have exam rules now". If the status is normal, the system determines that the student is taking the test normally, displays the course assessment instructions and calls the stored procedure to randomly select questions.

3. Test question generation module

The generated test papers are displayed on the page and students are asked to answer the questions. Click "Previous Question" or "Next Question" to answer the previous and next question, and click "View Question Status" to get an overview of the current question status. No matter which button is clicked on this page, it will cause the test paper to be "saved". After the student has completed all the questions, click the "Submit" button, a second confirmation will appear, and the student will jump to the page after confirming the submission.

4. Scoring module

Prompt the student that the test paper is submitted successfully and call the stored procedure, and then display the student's score.

Students log in to the "Student Login Interface". Candidates first enter the user name and password, and after confirmation, they can enter the "Exam Instructions Interface", click "Start Exam" to enter the exam interface, and can start the exam and time it. In the test interface, the test questions are randomly extracted by the computer, displayed to form the test paper, and the timing is started. After answering the test questions, candidates hand in the paper and enter the next interface. After the examinee submits the answer sheet, the computer will judge the paper, get the test score and display it, and store the test record of the student in the database at the

same time. After the examinee has entered the user name and password correctly, the exam description screen will appear, click "Start Exam", and the exam page will appear.

3 SIMULATION ANALYSIS

In the network environment, college Chinese should improve the teaching evaluation system, pay attention not only to the evaluation of teachers, but also to the evaluation of students themselves. It requires university teachers to formulate reasonable and feasible evaluations, evaluate students with diversified standards, and promote the development of university education. Continuous development and progress. In the traditional sense, there are still some drawbacks in the evaluation standards of college Chinese teaching. For example, the evaluation is still based on student performance, study time, and the number of questions answered. The act of plagiarizing assignments cannot be evaluated objectively. Therefore, this method of quantitative evaluation is more unrealistic for the current online teaching. In the future online operation, we must create conditions that are more conducive to students' search for resources, so that students can turn passive into active. In the aspect of the evaluation standard system, the university language stage should be comprehensively reformed and the evaluation standard should be improved, so as to prevent the occurrence of such problems as above.

The implementation process of teaching evaluation includes evaluation purpose, evaluation team members, introduction of evaluation scale and statistical scoring results. Before carrying out the evaluation of teachers' smarter teaching ability, it is necessary to clarify the purpose of the evaluation: one is to diagnose and improve the level of teachers' smarter teaching ability; the other is to summarize the teaching problems that occurred during the implementation of smarter teaching, and put forward constructive suggestions to ensure the quality of smarter teaching. An evaluation group was formed when evaluating teachers' ability to demonstrate teachers' wisdom in teaching. Panel members include experts in educational technology-related fields, subject teaching and research staff. Each member of the evaluation team is required to conduct real-time observation and evaluation of teachers' smarter teaching ability performance. It mainly includes the ability level of smart teaching preparation ability, smart teaching implementation ability, smart teaching evaluation ability, and smart teaching innovation ability. The evaluation system of teachers' smart teaching ability in this study is based on the TWPACK framework. The smart teaching ability is divided into four dimensions: smart teaching preparation ability, smart teaching implementation ability, smart teaching evaluation ability, and smart teaching innovation ability. The evaluation system includes 4 first-level indicators, 10 second-level indicators, and 27 third-level indicators. From the perspective of promoting the development of teachers' smart teaching ability and promoting the generation and development of students' wisdom, this paper makes a comprehensive evaluation of each element in each link of classroom teaching, and then grasps the level of teachers' smart teaching ability as a whole. The scoring standards in the evaluation index system are divided into 5 grades. Evaluators evaluate teachers in smarter teaching according to the evaluation index system by watching the classroom records. It is worth noting that there are 51 evaluation criteria under the dimension of "teacher's smart teaching ability" (Note: the evaluation criteria under "integrated and applied ability of smart teaching" need to be screened according to different disciplines). Therefore, the evaluation system has a total score of 235 points in the specific application evaluation practice activities.

As shown in Figure 1 and Figure 2, the distribution ratios of male and female students under different satisfaction levels are different. Taking the state of “relatively dissatisfied” as an example, the number of male and female students who chose this state was 6 and 9, respectively, with a relative proportion of 40% and 60%, and the proportion of the total survey sample was 1.9% and 1.9%. 2.9%, a total of 4.8%. The satisfaction status with the widest distribution of male and female students is "relatively satisfied", with 48 and 69 students respectively. 41% of the boys and 59% of the girls chose this status, accounting for 15.3% of the total sample and 59% of the girls. 22%. For males, while the proportion of males and females was the same for "very dissatisfied" ratings. It can be seen that there is no obvious regular change in the evaluation of the

overall learning satisfaction of male and female students. The satisfaction status of boys is selected from more to less as "satisfied", "relatively satisfied", "very satisfied", "somewhat dissatisfied" and "very dissatisfied"; "Very satisfied", "Slightly dissatisfied" and "Very dissatisfied".

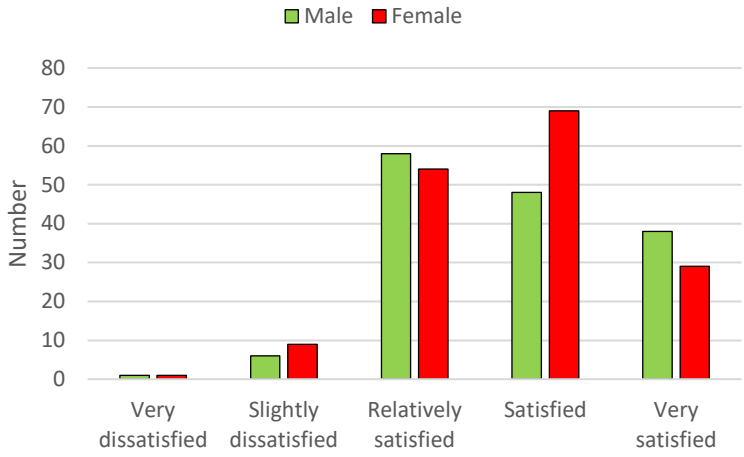

Figure 1: Difference of Male and Female.

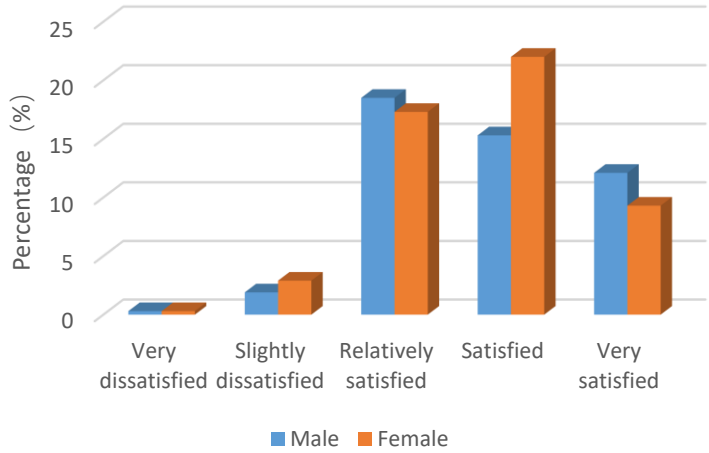

Figure 2: Percentage of Male and Female.

From the perspective of grades, this study investigated four grades of students from freshman to senior year, among which freshman and sophomore accounted for the vast majority of the survey sample, accounting for more than 80%. As shown in Figure 3 and Figure 4, the cross-analysis of the overall satisfaction of students and the grades of students found the distribution of students of different grades among the states of satisfaction. Among them, the satisfaction status with the widest distribution of different grades is "relatively satisfied", including 47 freshmen, 56 sophomores, 13 juniors, and 1 senior, a total of 117 people, accounting for 37% of the total sample. From the perspective of specific grades, there is little difference in the choice of satisfaction status among grades. The number of satisfaction status of freshman and junior year is "relatively satisfied", "satisfied", "very satisfied", "very satisfied", and "very satisfied". relatively dissatisfied" and "very dissatisfied"; except that the number of "satisfied" students is more than

"somewhat satisfied", there is little difference in other choices; due to the small number of senior students, their learning satisfaction evaluation is not as high as that of junior students. in a similar state.

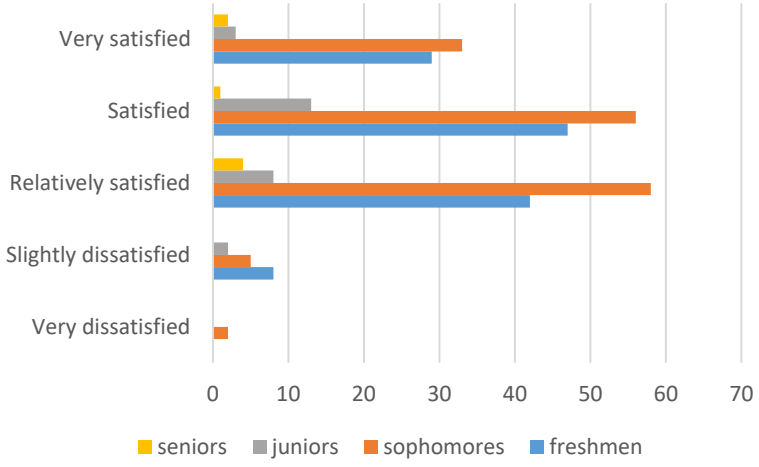

Figure 3: Number of different grades.

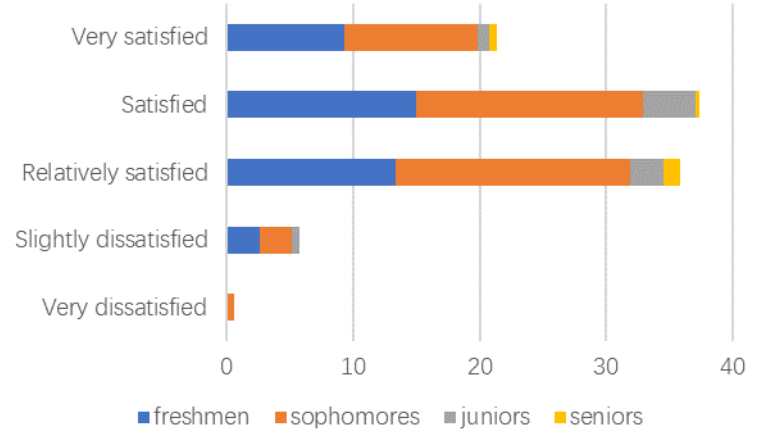

Figure 4: Percentage of different grades.

There are obvious differences in teaching content, teaching arrangements and teaching methods among different subjects of high school education. Therefore, this study attempts to observe whether students of different majors have consistent evaluations of learning satisfaction with multimedia teaching in high schools. For the convenience of research, this survey divides the disciplines into two categories: "humanities and social sciences" and "science and engineering". As shown in Figure 5 and Figure 6, the cross-analysis of students' overall satisfaction and major categories found that the most widely distributed satisfaction evaluation status of students in different majors was "relatively satisfied", of which 52 were in humanities and social sciences, and 52 were in science and engineering. There were 65 people in the class, with a total of 117 people, accounting for 37.4% of the total sample. Humanities and social sciences students' learning

satisfaction in each state is "satisfied", "relatively satisfied", "very satisfied", "relatively dissatisfied" and "very dissatisfied" from high to low; The number of people with the status from high to low is "relatively satisfied", "satisfied", "very satisfied", "somewhat dissatisfied" and "very dissatisfied". The results also can be seen in Figure 7.

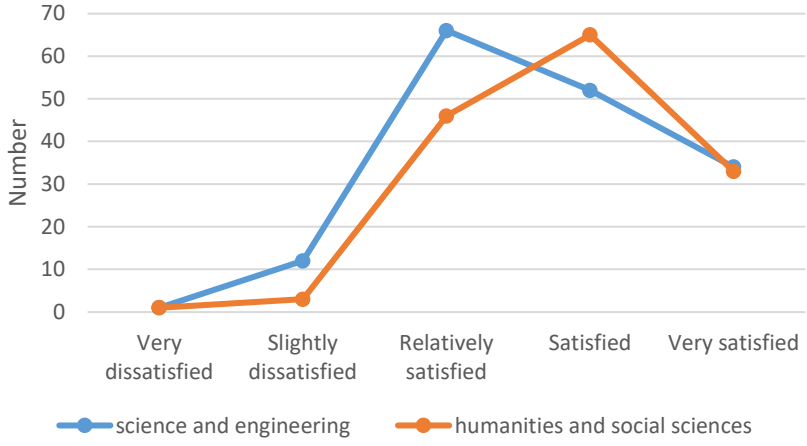

Figure 5: Number with different subject.

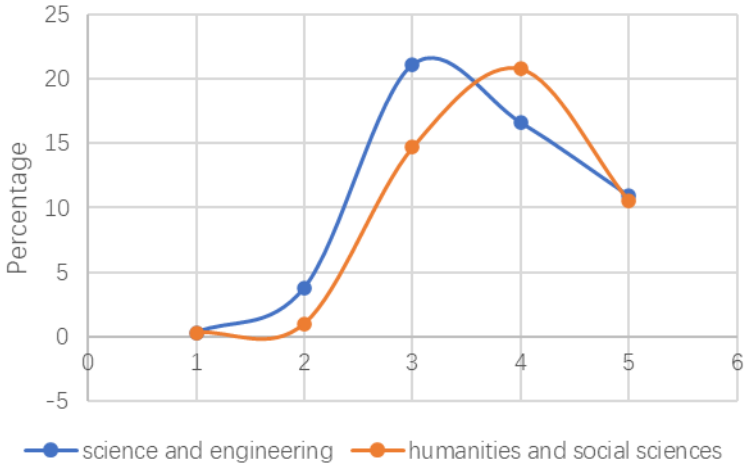

Figure 6: Percentage with different subject.

Therefore, from the perspective of teachers, we should fully realize that multimedia is only a teaching technology, and the effectiveness of teaching does not depend entirely on multimedia, but also includes teachers' personal knowledge accumulation, teaching environment creation, teaching skills selection, classroom teacher-student interaction and many other aspects. There is no fixed method for teaching, and whether a systematic teaching design can be carried out is not only an inevitable requirement for improving the quality of teachers, but also an important factor to improve the effect of classroom teaching. Therefore, it is necessary to judge whether it is necessary to use multimedia and whether other teaching methods such as integrated blackboard teaching are needed from the teaching content, so as to avoid the adverse effects of blind use.

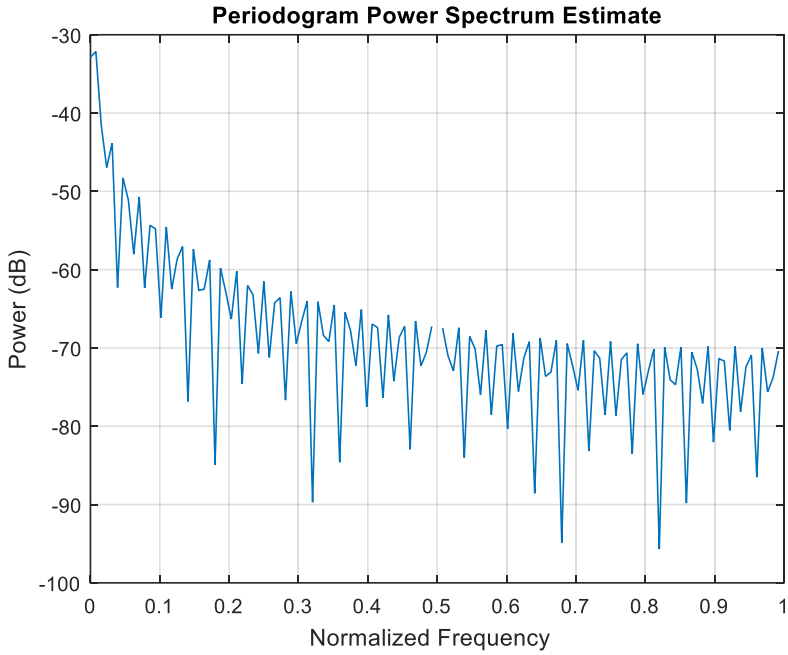

Figure 7: Predicted results.

In the current multimedia classroom teaching in colleges and universities, multimedia completely replaces the traditional classroom, which not only promotes teachers' inertia, but also is not conducive to students' understanding and mastery of teaching content, especially for some conceptual content, which requires teachers' explanation. It needs to be explained by means of blackboard teaching; before applying multimedia, it is necessary to design and prepare relevant courseware according to factors such as teaching content, student characteristics and teaching environment, and pay attention to the use of text, pictures, sound and video and other elements to improve the courseware. At the same time, it should avoid over-emphasis on the form of courseware, so as to bring unnecessary interference to students' acceptance and understanding. In the process of multimedia classroom teaching, it is necessary to observe the students' classroom performance in time, avoid reading the courseware as a whole, fully mobilize the atmosphere of the multimedia classroom, and collect students' evaluation and feedback on the effect of multimedia teaching after the classroom teaching. Make timely and effective adjustments.

4 CONCLUSION

The standard of teaching evaluation is the baton of teachers' teaching, which guides the direction of teachers' daily teaching activities. Therefore, formulating scientific, reasonable, effective, feasible and quantitative teaching evaluation standards is an inevitable requirement to improve students' learning satisfaction and the quality of multimedia classroom teaching in colleges and universities. In actual teaching, the emphasis on this content is mostly reflected in students' evaluation of teaching, but it can be found that students' evaluation of teaching is mostly concentrated at the end of the semester, the number of times is small, and there is a lack of supervision and evaluation of the process.

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