DISCUSSION ON THE TEACHING OF CALCULATION METHOD

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Abstract: -
According to the problems in the teaching of calculation method, we give some methods. We can make full use of mobile phones for testing. Moreover, teaching can get feedback from scientific research. Furthermore, we can use resources after class. Based on the above methods, we can improve students' enthusiasm and participation in learning this course.

Keywords: *calculation method; teaching process; feedback*

Calculation method is a public basic course for science and engineering students. It involves a wide range of students.We will encounter various problems in teaching. In [1], the author points out the importance of online teaching and discusses the online teaching methods and the solutions method. In [2], the author points out the current teaching situation of calculation methods in engineering majors in university.Moreover,the author introduces the importance of learning calculation methods. Through the classroom teaching in recent years, this paper shows its own ideas for the problems in teaching.

I Make full use of mobile phones for testing

In modern society, college students bring mobile phones into the classroom. This phenomenon is inevitable. We can make full use of their mobile phone resources and have a small test in the middle of class. When I explain interpolation, I give students a test. For example, Figure 1 is given.
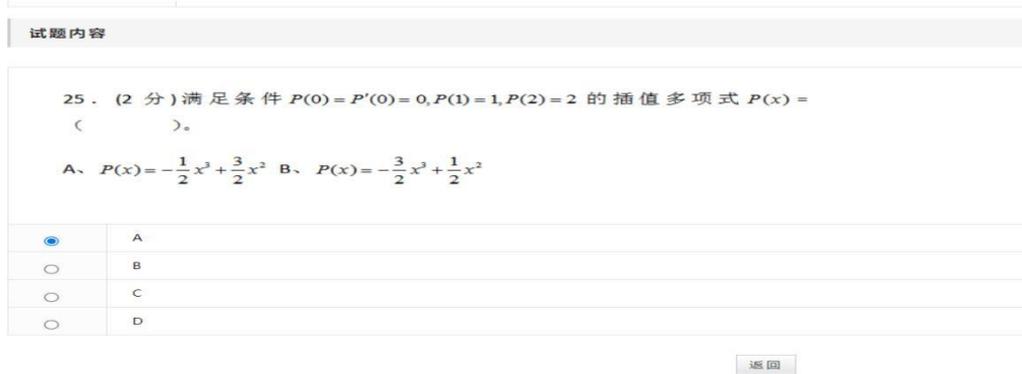
Figure 1 Student test questions

A test is added to the middle part of the content of each class, one is to improve
the efficiency of their listening in class, and the other is to grasp the degree of knowledge mastery of students in time.

II Algorithm for visualization

There are many algorithms in Calculation Methods. It is difficult for students to understand if they simply talk about algorithms. Therefore, visualization of algorithms is required. For example, when explaining Runge phenomenon, it is directly displayed with dynamic graphs, as shown in Figure 2.
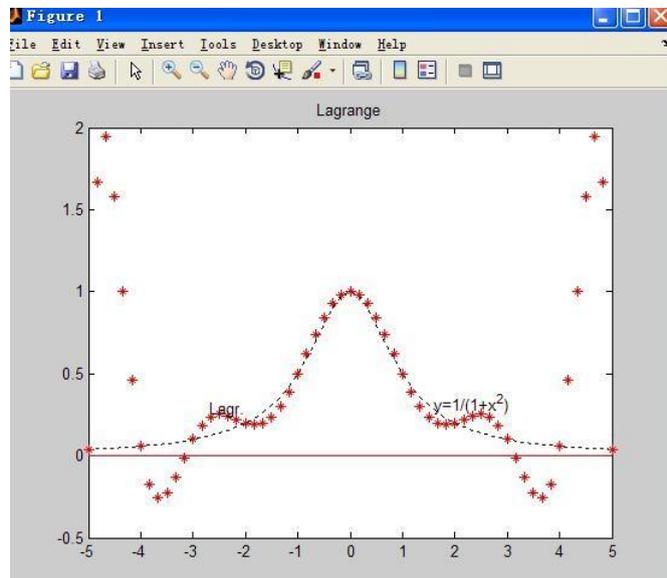

Figure 2 Runge phenomenon

III Teaching can get from scientific research

Facing the pressure of scientific research, some teachers in university have focused on scientific research and spent relatively little time on teaching. It is difficult to calm down and conduct in-depth research on the knowledge in textbooks.Many teachers taught to students knowledge itself. As a college teacher, in addition to explaining the knowledge to students clearly and thoroughly, they should also pay attention to the depth and breadth of students' learning. In fact, teaching can get from scientific research. The teachers should put the results of the foreword on scientific research into the classroom. For example, when talking about the iterative solution of linear equations and considering the asymptotic convergence rate, I will mention how to speed up the convergence rate of linear equations. Now many authors have studied the linear equations by preconditioning. We can compare the convergence speed of the iterative method of the equation system after preconditioning with the previous one. I have done in scientific research into teaching .The students are very interested. When doing the graduation project, some students take the initiative to say that they need to do the preconditioning of solving the equation system. It is also mentioned in [3]: "Consciously integrate into the guidance of scientific research direction, so that students can keep abreast of some cutting-edge scientific research trends, and can sow the seeds of scientific research interest in students' hearts." In order to increase some knowledge of your own research field in the course, you can increase students' knowledge and vision, so as to improve students' interest in learning this course.

IV Make full use of time and resources after class

With the rapid development of the internet today, we should pay more attention to the use of students' time after class in teaching. Some students are not good at asking questions in person. We can solve the problem of students learning calculation methods through QQ group and school network teaching platform after class. Students can ask their own questions in the discussion area of the online teaching platform, and teachers give feedback in a timely manner. This will increase the time students spend studying the course.

V Pay attention to student feedback

Each semester, the teachers will distribute questionnaires to the students. The students will give timely feedback on the courses of this semester. We can understand the students' learning situation in time through the questionnaires. Moreover, we can make centralized analysis on the problems fed back by different students and make timely improvement for the teaching problems raised by students. We can Provide reference for follow-up teaching.

In short, teaching is a process of continuous learning, continuous improvement and continuous thinking of teachers. According to the students' problems, teachers can improve teaching methods in a timely manner, which improves students' interest and participation in learning.

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