The Blended Teaching Modes Based on 'Internet Plus' for University Physics Teaching

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Abstract. In this paper, based on 'Internet plus', the blended teaching modes for university physics teaching are studied. According to the teaching practice, the quality of university physics teaching may be improved by blended teaching modes which is based on'Internet plus'. The modes are rationally combined various teaching elements, which are effectively explored and practiced for optimizing teaching effect and improving teaching quality.

Introduction

Nowadays, with the rapid development of the world and the rapid development of science and technology, compound talents are the urgent needs of the society. Classroom is the main position for training students, which is the key factor affecting students' learning. How to improve the teaching quality of engineering specialized courses has a great impact on fostering the students' abilities in *Emerging Engineering Education*.

University physics which has rich connotation, large amount of information and wide coverage, is a compulsory basic course for students of *Emerging Engineering Education* and an important enlightenment course for guiding students into the palace of science. It plays an irreplaceable role in the talent training. The study of university physics is of great significance to students majoring in Emerging Engineering Education. At the same time, it is also a course with difficulty in teaching and learning. Thus the teaching methods still need to be studied and explored continuously[1].

The blended teaching based on 'Internet plus' is a new teaching mode. It advocates the leading role of teachers, highlights students' dominant position in the learning process, and improves the teaching effect through the transformation of teaching process, teacher and student roles and so on. This mode focuses on the cultivation of students' ability, the practical ability, innovation ability of new engineering, the, teamwork, other engineering core competencies, and so on [2-3].

In order to further discuss the modes of 'Internet plus' blended teaching in the implementation courses in *Emerging Engineering Education*, and put forward some valuable suggestions, this paper focuses on the teaching mode about course of university physics. In the process of implementing the 'Internet plus' blended teaching, the corresponding policy recommendations are put forward. based on the research results. The following is a detailed description of the blended teaching modes design in university physics course.

The Blended Teaching Modes

The Mode Based on 'Internet Plus PAD Class'

In the teaching methods of university physics, we should emphasize the basic concepts, theories and analytical methods of university physics, and pay attention to the combination of theory and practical problems. It can mobilize and enhance learning enthusiasm, improve practical ability and innovative ability. It can also improve the classroom teaching of new subjects. The 'internet plus PAD class' divides the classroom into two parts: The teaching and the discussion[4]. Students can independently arrange and digest the contents taught in the classroom, and the corresponding learning materials such as matching exercises can be released through the network platform, so that

students can practice and think after class. Half of the class time is given to the students to discuss in groups or in the whole class during the 'interclass discussion', therefore the students can participate in the discussion effectively, which help the students understand the knowledge in time, and improve the effectiveness of the exercises. The mode can be designed as 'Internet plus PAD class', which is shown as Figure 1.

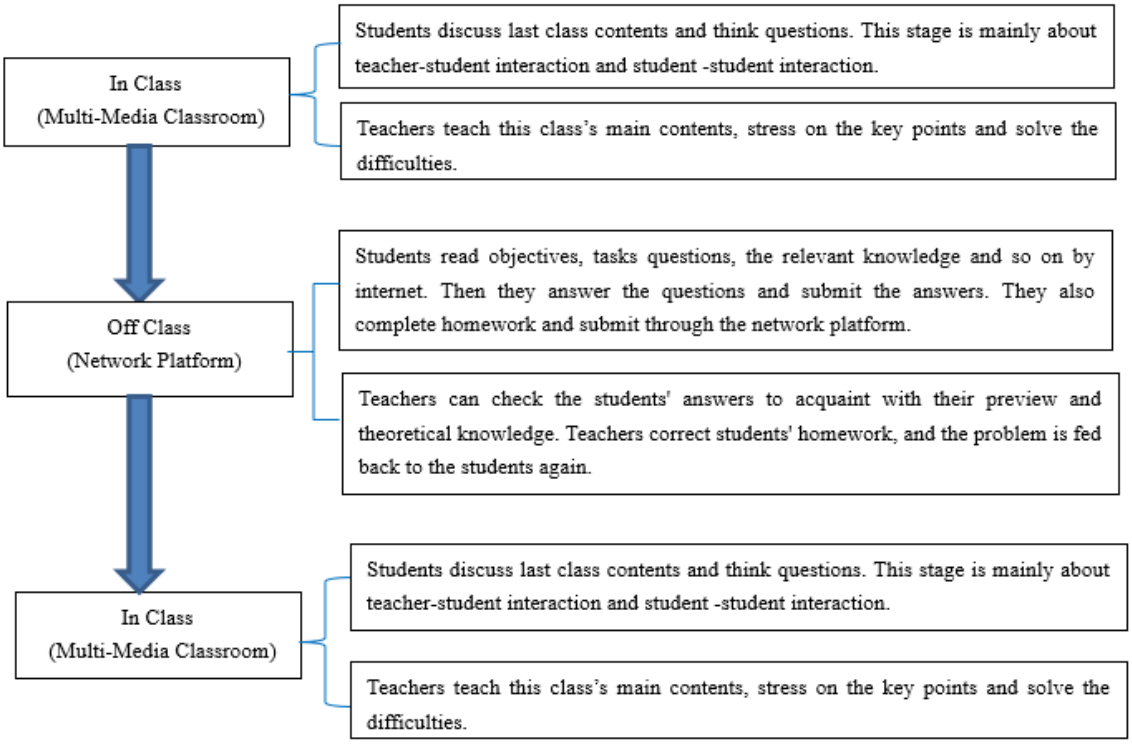

Figure 1. The blended teaching mode based on 'Internet plus PAD Class'

The Mode Based on 'Micro Assistant' Platform

The blended teaching mode based on 'Micro Assistant' platform can interact in class, sign in, screen, group cooperation, after-class learning, and improve comprehensively[5].

In order to enhance teachers' activities, the traditional way is to ask questions and let students raise their hands. In this way, students who do not raise their hands will cast different eyes on the students who raise their hands frequently, which makes the overall participation of students in the class not high, and the use of mobile phones can achieve full participation and learning. Students sign in by their mobile phones on the Wechat. Teachers can know when each student arrives in the classroom, which greatly reduces the lateness rate. In addition, students can be divided into groups to answer questions and so on. In the process of teaching, students can show the problems in the video or classroom by the way of bullet screens. Teachers can know everyone's progress and problems in the first time, give guidance and help in time. Students can also understand other students' situation and inspire their own thinking by watching the bullet screens. They answered questions directly on the barrage. For typical selectivity problems, we can also use Wechat or QQ voting to show the results of voting and the number of voters on the spot. It is convenient for teachers to test and know every student. In addition, the courseware and related materials will be uploaded to the micro-assistant platform to facilitate teacher-student interaction and after-school learning. In view of the fact that students have different levels and different learning abilities, the students are divided into study interest groups, and the students with strong learning abilities act as group leaders to help the students in the group make progress together. In addition, the group will complete the application-oriented homework with the optional topics after class, and finally submit it. The form of device can be shown it in class. The final total score according to a certain proportion. Through teamwork and actual device production, students' practical ability can be improved comprehensively. For those students who are interested in learning, it is recommended

that they read the latest papers and patents at home and abroad, participate in *Innovation and Entrepreneurship Competition, Challenge Cup*, and so on, which further enrich their knowledge structure and enhance their practical ability, and to a certain extent, improve their scientific and technological English level.

Conclusion

In summary, in this paper, the 'Internet plus' blended teaching modes in university physics course are discussed.

Although some new teaching methods have been put forward and good teaching results have been achieved, we still need to improve them. In future teaching, we should take full account of students' pre-knowledge reserve and learning cognitive law, deeply analyze the interrelation of curriculum knowledge points, carefully design classroom teaching and practice links, continues to introduce new teaching modes. This is helpful for cultivating more excellent applied, innovative and compound undergraduate talents.

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