

The Influence of Network on Advanced Mathematics Teaching

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Abstract: The rapid development of the network has an increasing influence on education and teaching, which affects students' thinking mode and learning style. Advanced mathematics is an important subject in the first year of college, and we must pay attention to the impact of the network. A survey of our college students shows that the majority of the students have affirmed the network's help for their learning. From the aspects of the attraction of students, the flexibility and pertinence of learning, the efficiency of education, and the autonomy of the students, the paper expounds the positive impact of the network on higher mathematics teaching.

Keywords: Network. Advanced mathematics. Education. Teaching. Pros and cons.

With the development of modern science and technology, the network has gradually spread to all aspects of our lives, and the advantages and disadvantages brought a by it have also appeared, especially in education and teaching. At present, the number of online education users in China has increased year by year, showing a steady growth trend. In 2017, compared with 2008, the growth rate was 8.1 percentage points. Up to now, the number of online education users in China has reached 120 million. The huge online education group indicates the rapid development of online education in China as well as the fact that people have begun to conduct deep research on their advantages and disadvantages. According to the survey, more than 93% of people are satisfied with the network education mode, and only 0.5% are bored with the online education method (the remaining 6.5% feels average). The network has had a profound impact on students' thinking patterns, learning styles, outlook on life, world view and value. Therefore, it is now necessary to think about the impact of the network on advanced mathematics teaching. For the advantages and disadvantages of the network for advanced mathematics teaching, the survey of students in the school shows that 99% of people think that using the network mode to assist in teaching advanced mathematics is very helpful for the current study, the following are the reasons:

1. Online teaching is recordable, students can watch the course video repeatedly after class, clearly record the difficulty of learning, and they can pause the video for thinking when they have doubts.
2. For the geometric problems in higher mathematics, teachers can use the network software to make accurate drawings as the basis for solving the problem, which also shows the limitations of the traditional blackboard.
3. For the college students nowadays, computers, mobile phones, and tablet computers are widely used. These carriers can effectively guarantee the spread of online education, and the popularization is wide.
4. Online education has the characteristics of convenience. It is not necessary to learn advanced mathematics knowledge at a specific time, place and condition as it is in traditional education.

5. Online education can provide richer and more comprehensive educational resources to provide a variety of teaching methods for students to learn.

For the disadvantages brought by the network, students also indicate: 1. Online education can not provide a good learning environment for students, and it is not convenient for students to concentrate on learning. 2. The lack of management of online education is not conducive to unifying the progress of students' learning.

It is not so difficult to find that online education has both advantages and disadvantages for advanced mathematics learning. So whether the benefits outweigh the disadvantages or the disadvantages outweigh the benefits. I have the following opinions.

一. **The network makes teaching more attractive.**

As mentioned above, students have long been tired of traditional teaching methods, monotonous writing by chalk, boring oral teaching, unchanging blackboard, and can not let students experience the cuteness and wonder of mathematics, which naturally cannot attract students' attention and the teaching efficiency is declining. Not to mention quality-oriented education. Network technology is an emerging technology, and our new generation of college students must master this technology, which is also a necessary requirement for excellent young people to enter the society. Using network for teaching, based on network technology, combined with excellent educational resources of colleges and universities, and the best teachers and best teaching achievements of the university will be spread to all over the world. No matter where they are, as long as students have network and certain computer operations, they can acquire knowledge and it can maximize the utilization of teaching resources [1]. It not only can let students know and apply this technology to learn other things in advance, but also it is more conducive to stimulate students' interest in learning, which is the best teacher. This qualitative leap will be a huge breakthrough. Of course, it does not guarantee how many the students motivation to learn advanced mathematics can be changed, but it is definitely one aspect that is superior to traditional teaching.

二. **The network makes teaching methods more flexible.**

The network instant messaging has been very mature, which brings great convenience to the students. "Instant answer", we know that in addition to the class time, there is not much time in the intersection for the university teachers and the students, and it is difficult for students to find other opportunities to contact teachers. As a result, some doubts that arise after school or in their after-school assignments will not be resolved in a timely manner. But with the help of the Internet, students can get the answers of teachers or the "super scholars". At the same time, the network has a large number of resources and question banks. In traditional teaching, students are often not be trained abundantly, and there are not enough types of question types to be found. However, the network has abundant resources, which are inexhaustible and can be found from soup to nuts. The network can also help to realize the teaching interaction. The teacher clearly proposes the learning objectives and learning requirements, guides and controls the students' online learning direction, and then let students refer to the relevant information online. On the network platform, there is a relationship between teachers and students as well as a relationship between students and students, which can bring them the collision of thought, finally teachers can check the students' grasp of situation through the "online assessment" .

三. The network makes teaching more efficient.

The carriers of online education are high-tech electronic products (such as computers, mobile phones, etc.). These electronic products can accurately and objectively record the types and times of questions asked by students, and can draw clear and observable charts for teachers to observe their students' key and difficult knowledge acquisition. It is conducive for teachers to guide students to learn more specifically. Secondly, the drawing and calculation function of the high-tech electronic products can help teachers to express the meaning of the title in advanced mathematics teaching to the uttermost, for example, the geometric meaning of the partial derivative of the binary function, as well as the proof of the double integral conversion second integral. Teachers can use the network composition, combined with three-dimensional animation rotation, the three-dimensional sense can make learning intuitive and efficient, it can fully demonstrate the forming process of knowledge, assist students to establish clear representation, and help students understand the problem and master the knowledge.

During the training process, it was mentioned that there are a large number of teaching resources and questions on the Internet, which has more advantages than the traditional teaching which lacks training questions. However, this does not mean that looking for a needle in the ocean, also it dose's like the blind people touch the image, the students do not have to swallow the knowledge without understand. It only takes several times of "Online practice", the network will intelligently make a set of question bank or even a study plan for each person according to the results of students' practice, and the mistakes feedback. And students no longer need to practice the written exercises for countless times to make up for the mistakes.

四. The network makes teaching more targeted.

It varies from person to person and teaching must be carried in accordance with students' aptitude, which is advocated by the Chinese sage Confucius. It would be great if it be fully and efficiently implemented. The "online practice" in the network is a well-targeted implementation. In addition, students can autonomously choose their own online courses by learning the situation, and choose the part they want to know according to their individual needs, forming an objective cognition based on the feedback information of their actions and the solution to practical problems [2].

五. The network makes teaching more autonomous.

In traditional teaching, the orientation of teachers and students is often not clear enough. Usually the teacher dominates the class, the position of the students is often very passive, and the knowledge taught in the class becomes indoctrinated. The network enables the teacher to change their role from the knowledge transferee, the active teacher, the monitor of the teaching activity to the assistant of the students, so that the student transform from the subject of knowledge transferee, the passive recipient of external stimulation to the subject of information processing. As well as active builders of knowledge, which are conducive to the growth of students with creative talents and innovative thinking and capabilities? Through advanced mathematics teaching in the network environment, students discover actively, explore actively, independently or collaboratively build knowledge, conduct independent learning and leap-forward learning according to their own foundation and ability level, give full play to students' subjective initiative, develop personality and initiative spirit [3].

The network platform greatly enriches the amount of teaching knowledge and expands the horizons of students. Students can enjoy a large amount of mathematics knowledge without leaving home. The network has advantages and disadvantages for the teaching of advanced mathematics, but the profitability still outweighs the drawbacks. As for those drawbacks, we can improve them by cultivating the students' self-regulation of learning. We can rely on the network platform to develop and apply network resources, improve the network teaching and learning environment, create a good network learning atmosphere, make the class and the after-class study stimulating, and cultivate students' ability in all aspects. Also we can use the advantages of the network to disseminate knowledge, improve students' learning efficiency, and promote the utilization degree of teacher and educational resources. The network platform provides a benign interactive platform for teaching reform, and has a broad prospect for the future development and is becoming the reform orientation of teaching, and it will add strength to the innovation and reform of China's education.

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