

Research on Middle School Mathematics Teaching Reform based on "Internet +"

Duan Yonghua

Xi'an University, 710065

Keywords: Internet; Mathematics in Middle School; Teaching; Reform

Abstract: With the increasingly sound framework of China's Internet system, network has become an indispensable part of people's work and life. Networking provides an easy-to-use and convenient platform for the development of various industries. The Internet+ model has led the trend of reform and development. How to combine the Internet with education and teaching, to realize the integration of education and teaching resources under the condition of Internet, to change the way of education and teaching, and improve the quality of education and teaching have become the focus and hotspots of education and teaching reform and innovation in the new era. This paper discusses and studies the teaching reform of subject on mathematics in middle school under the condition of "Internet plus", in order to provide some basis for the subsequent theoretical innovation and practical exploration.

Although the birth of the Internet has not been a long time, but it has profoundly affected our work and life in all aspects. Nowadays, with the deepening of China's new curriculum reform, the teaching reform based on "the Internet Plus" has become an irresistible trend. "The Internet Plus" is a concept, which is an interconnection platform with the Internet as the core. To some extent, "The Internet Plus" has become the carrier and core of building a new type of classroom. With the development of the Internet to a deeper and broader level, how to combine the reform and innovation of education and teaching with the Internet, so that the two become complementary to each other as a whole, and fundamentally change the traditional teaching mode of middle school education has become the research goal of many people with the united insight and mind.

After years of development, China's mathematics education and teaching in middle schools have made remarkable achievements in many aspects. However, on the whole, under the condition of Internet and information-oriented development, mathematics teaching in many middle schools still adheres to the traditional educational concept and keeps to its own course. This pattern seriously hinders the healthy development of China's secondary education.

Middle school mathematics teaching is an important part of middle school education in our country. How to do a good job in the innovation and reform of middle school mathematics education under the condition of Internet is an urgent practical problem for every educator.

1. Promoting effect to teaching mathematics in middle school under the condition of Internet

The Internet is widely known for its open, inclusive, efficient and convenient features. The

middle school mathematics education and teaching system based on Internet has distinct advantages.

1) Enriching teaching resources in mathematics in middle school. The openness of the Internet makes resource sharing possible. Under the condition of Internet, we can find various kinds of middle school mathematics teaching resources conveniently and quickly. If these resources can be used reasonably and fully, it will greatly enrich and expand our knowledge base of middle school mathematics. Internet teaching resources are the supplement and extension of textbook teaching content. Under the condition of Internet, the teaching resources are more three-dimensional and lively, which has a good effect in expanding students' knowledge and improving students' learning efficiency.

2) Improving the teaching method in mathematics in middle school. In recent years, the traditional teaching mode of middle school mathematics education has become the stumbling block of the reform and development of middle school mathematics education in some aspects. Many teachers often feel that the traditional teaching model of middle school mathematics education cannot be completely abandoned, but there is no way to find a better way to crack it. In the traditional middle school mathematics teaching practice, everything centers on the teacher, and the teacher leads the whole class. The drawbacks of this kind of education and teaching are obvious. It cannot fundamentally mobilize the enthusiasm and initiative of students in learning, and to some extent, it cuts off the interaction between teachers and students. Under the condition of Internet, information technology can greatly expand the space of education and teaching and break the limitation of learning time. At present, multimedia, online teaching, micro class and Mooc are the main means of high school mathematics education and teaching with Internet technology. The results of these teaching methods are generally very positive.

3) Marching forward to sound progress in mathematics in middle school. The integration of Internet and education is the trend of future development. The reform of education and teaching under the condition of Internet is not only the necessary requirement of The Times, but also the only way for the development of education and teaching itself. Internet has become an important internal factor to promote the steady progress of China's secondary education. Studying and practicing the reform strategy of middle school mathematics teaching under the condition of Internet can lay a good theoretical foundation for the subsequent reform and innovation of education and teaching.

2. Key points of teaching reform in mathematics in middle school under the condition of Internet

1) Foundations. We should first step up efforts in infrastructure construction. From the view of school, we should strengthen the construction of network teaching software, hardware and teaching facilities, create a high-quality campus network environment, and lay a solid material foundation for the internet-based mathematics teaching.

2) Teachers. The condition of teachers is an indispensable factor for the reform of mathematics teaching in middle schools under the condition of Internet. In order to adapt to the requirements of Internet condition education and teaching reform, teachers should strive to improve their comprehensive quality. Teachers should first make full efforts in information literacy, be good at using information teaching facilities, and be good at integrating educational and teaching resources under information conditions. Second, teachers should strive to improve their professional quality, we need to see the urgency of the middle school mathematics education teaching reform, to there is sense of mission and sense of responsibility to join in reform and innovation, set up reform consciousness in daily work and study, clear conditions, the relationship between middle school mathematics teaching reform and Internet in teaching practice to explore middle school

mathematics teaching of new ideas, new methods, new form. Finally, the majority of teachers to forge their own moral literacy. Since the implementation of the concept of core literacy education, middle school mathematics has been not only limited to teaching students' computing ability and improving their mathematical knowledge, but also focuses on the overall improvement of students' comprehensive ability and accomplishment, among which moral education is a very important part. This is similar to the core goal of middle school mathematics teaching. Therefore, we should integrate moral education and intellectual education, guide students to cultivate their own correct outlook on life, values, moral values, and guide students to forge their own ideological quality.

3) Evaluations. The teaching evaluation system plays a very important guiding role in education and teaching. Under the condition of Internet, an important part of education and teaching reform is to design the corresponding teaching evaluation system in advance. We should clarify the educational and teaching objectives under the Internet condition, regulate the Internet teaching reform behaviors, formulate scientific and standardized quantitative standards, qualitatively and quantitatively analyze the teaching effect of teachers, create a scientific and efficient evaluation system, and guide and urge teachers to complete the teaching reform tasks under the Internet condition.

3. Resistance to the reform of teaching in mathematics in middle school under the current Internet conditions

1) Teaching method. Mathematics teaching in middle school is heavy task, in order to teach students more knowledge in the limited teaching time, teachers generally use full teaching method, and there is no spare time to pay attention to the growth of other aspects of students. If the Internet teaching resources are attached to the traditional teaching means, students will only convert the book knowledge into electronic version, and cannot achieve the purpose of inspiring students to think. At present, the traditional teaching method is still the main force of mathematics teaching in middle school.

2) Teaching Idea. Although internet-based mathematics teaching in middle schools has been promoted in many middle schools, the overall quality is not high, which has something to do with the resistance of traditional education concepts. At present, there are still some problems in the middle school education and teaching reform under the condition of the Internet, such as the ambiguity of subject and object, the confusion of teaching main line, the lagging of educational concept, etc. The role of teacher has not been completely transformed. As the main planner of the class, she is also the driving force of the class. The problem of how to improve students' initiative in class has not been completely solved.

4. Countermeasures in teaching mathematics in middle school under the condition of Internet

Through the analysis of the necessity of middle school mathematics teaching reform under the condition of Internet, it can be seen that the teaching reform under the condition of Internet plays a very important role in improving teaching conditions, enriching and optimizing teaching methods, and promoting the benign development of middle school mathematics teaching. Based on this, we should focus on the research of the thoughts and methods of middle school mathematics teaching reform under the condition of the Internet, and strive to bring forth the new in theory, and to guide the practice. According to the author's personal experience, the following points should be taken as the starting points for the reform of middle school mathematics teaching under the condition of Internet:

1) Renewing teaching idea. The reform of middle school mathematics teaching under the condition of Internet is a systematic project, which needs scientific guiding ideology, scientific

means of implementation and scientific evaluation system. Among them, scientific guiding ideology bears the brunt. We should use the Internet thinking to guide our education and teaching reform, and the idea of people-oriented education throughout. In education and teaching, we should be good at reasonably using Internet resources according to the differences of students' interests, literary literacy and other personalized factors, and guide students to achieve teaching objectives through autonomous and self-conscious learning. We can make full use of some relatively mature education and teaching modes. For example, we can introduce micro-class, Mooc and other teaching methods into course learning, give full play to the leading role of teachers, and use the interactive platform under the condition of the Internet to timely grasp the learning progress and key points of students. We will know how to use the student to participate in social activities enthusiasm high characteristic, lets the student to participate in the curriculum design, courseware and characteristics of curriculum planning, to also division also friends treat each participating students, let students grasp the essence and characteristics of curriculum reform in the new period, and thus unconsciously become the master of course construction.

2) Improving scientific ability. Due to historical and objective factors, China's secondary education system is quite different from that of foreign countries. China's middle school mathematics teachers mainly graduated from normal colleges or comprehensive colleges of mathematics majors. As a result, the computer literacy of some teachers is low. Many teachers have very comprehensive mathematical theoretical knowledge, but they have never been exposed to computer, communication and other majors, and even if they have, they are only dabble in them. Many mathematics teachers have their own ideas about the education and teaching reform under the condition of the Internet, but when it comes to the concrete implementation link, they often feel powerless. This is by no means an isolated case, but it is common among mathematics teachers. Therefore, to popularize and improve science and technology literacy among mathematics teachers is not only the need of current education and teaching development, but also the inherent requirement of curriculum construction.

3) Enhancing teaching method. The optimization of teaching methods under the condition of Internet is a process of overall improvement. When we optimize our teaching methods, we should actively rely on the existing technical conditions and apply the idea of innovative thinking to the whole process of education and teaching. In addition to classroom learning, we should also make full use of various network conditions, the course content into specific courseware, so that students can browse and learn at any time and anywhere outside the classroom. In short, we should fully explore the advantages of Internet education and teaching. In fact, mathematics teaching and the Internet quite a long history, the early Internet in the content is mainly aimed at computing. With the progress of science and technology, the way of information dissemination on the Internet has changed dramatically. However, the core functions of information dissemination and education on the Internet have changed all the time. The internet-based model of middle school mathematics teaching, in fact, from a certain point of view, can completely trace the development of the Internet itself.

5. Conclusion

Nowadays, the Internet has penetrated into every corner of our work and life. The combination of Internet and education has become an irreversible trend. How to combine middle school mathematics education with the Internet, make them blend, promote the quality of middle school mathematics teaching, and promote the cultivation of students' comprehensive quality has become a hot issue in education. As an educator, we should actively explore, have the courage to practice, arm the mind with a new educational concept, treat the reform with a scientific attitude, take the post as

the fulcrum, and try our best to promote the innovation and reform of teaching and learning in mathematics in middle school.

References

- [1] Luo Koumin. *Research on the Integration of Information Technology and High School Mathematical Modeling Curriculum* [J]. *Information and Technology Education*, 2006(7)
- [2] Wang Lin, Zhang Hongyan. *Exploration and Practice of Mathematical Modeling Teaching Reform* [J]. *Value and Project*, 2013(1)
- [3] Jian Guoming. *Exploration and Practice of the Teaching Mode of Mathematical Modeling in Local Colleges and Universities* [J]. *University Mathematics*, 2005(2)
- [4] Yuan Zhiqiang. *Investigation and Analysis of Computer Aided Instruction* [J]. *Journal of Mathematics Teaching*, 2002(11)