

On the Teaching Reform in Primary and Secondary Schools under the Network Education Mode Discussion on hazards, causes and countermeasures

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Abstract: Online education has become an indispensable way of learning in the new century. It has changed the teaching methods of primary and secondary schools. Therefore, the research of online education is particularly important. This paper starts with the problems existing in online teaching in primary and secondary schools in China, discusses the reasons for its emergence, and probes into its causes.

Key words: online education; Secondary School Education; Education informatization; Information quality; Students' emotions

Introduction

The advent of "Internet plus" has brought unprecedented challenges to education and education. Artificial intelligence, virtual reality, online education and other education fields in the new century are all hot topics. Network teaching is a new teaching method developed in the past 30 years. Online teaching is the most important key word in Horizon Report 2020 (Teaching and Learning Edition). Antonio Ricardo even called it "the most influential technology in the past 200 years". In 2020, with the outbreak of novel coronavirus, online teaching has entered a peak of rapid development. It is shouldering the online learning task of billions of college students and has become a special era. The popularization of online education makes online education face great opportunities and challenges. Network teaching is the main learning resource for billions of students. It shoulders huge responsibilities, but also faces many unexpected problems, especially in primary and junior high schools. Since then, many experts have begun to conduct in-depth discussions on online teaching. Some people regard online teaching as a temporary measure, while others regard online teaching as a new teaching mode. Therefore, is online education beneficial or unfavorable to the reform of primary and secondary school teaching? This requires us to explore and avoid risks to make full use of them.

1. The development trend of online teaching in primary and secondary schools

As a form of network education, network education is a way of information transmission and learning using network technology. After more than 30 years of development of online education in China, both the discussion of online education theory and technology, the function and connotation of online platform, and the application of online education in the field of education and teaching are gradually maturing. In addition, the state vigorously supports network teaching, and in 1999, the pilot project of "modern distance teaching" was implemented; The 19th National Congress put forward the development goal of accelerating the

modernization of education and building a powerful country in education; The Education Informatization 2.0 Action Plan proposes to take the construction of education modernization as a whole and the modernization of education as a whole; China's Education Modernization 2035 has always highlighted the role of China's education informatization construction in promoting the modernization of China's higher education; In 2019, with the issuance of the Guiding Opinions of the Ministry of Education and other 11 departments on Promoting the Healthy Development of Online Education, all parties expressed their strong support for the development of online education. According to the 48th Statistical Report on the Development of China's Internet, by June 2021, China's online teaching has reached 325 million people, and online teaching has entered a period of rapid development. However, it can be seen from the extensive development of the epidemic prevention and control stage that online education is not perfect, especially in the formal form of primary and secondary education.

2. Problems in online teaching in online schools

2.1 The inequality in education has further worsened

"Equal and high-quality teaching" is an important value for the development of online teaching towards a higher level. Online teaching has always been regarded as a strategy to promote education equality. At present, many scholars still argue about "promoting education equality" or "making education unequal". How far is the distance between online teaching and reality? During the epidemic prevention and control period, online education carried out a large number of online teaching in China, but this time the teaching is an exploration and exploration, and behind the constant emergence of various emergencies is the "imbalance and insufficiency" of the development of online education. Whether it is family, teachers or online teaching, it shows imbalance and inadequacy. Therefore, the fairness of education has become particularly prominent. In China, carrying out online education will encounter unfair problems.

2.2 Lack of assurance of education quality

The effectiveness of online teaching is a permanent topic to ensure the teaching effect. Is online education "classroom migration" or "online education" triggering "online education"? Through the actual operation of the epidemic, there is no shortage of quantity and participation in online education, but the quality cannot be guaranteed. Whether in on-site teaching or in the construction of online platforms and resources, quality should be put in the first place. Classroom migration has become a major hidden danger of online education. Some teachers adhere to the same practices as previous classroom teaching in terms of concepts and teaching methods. For online education, there is only "usable" and "usable" role. At the same time, in teaching, the training of teachers is also mixed, and teachers often fall into the dilemma of "many but useless". In order to make online education truly enter middle schools and normalize middle schools, we need to improve the quality of online education.

2.3 Lack of feelings between teachers and students

Students' learning is a kind of input that includes not only behavior and cognition, but also students' emotional input. The physical space distance of online education is not only the distance between vision and space, but also the distance at the spiritual level. It will not only make teachers feel powerless in teaching, but also hinder the emotional communication between students and students, thus weakening students' feelings. The "cold" interaction between teachers and students makes the communication between teachers and students lose "temperature". In particular, middle school students are at a critical stage of personality formation. They should have knowledge, group recognition and warmth from the outside. As the guide of primary and secondary school students, teachers should not only teach their knowledge, but also their emotional input will have a certain impact on their behavior and cognitive input.

2.4 Specification of network teaching

The teaching aid itself is a kind of auxiliary thing. If you use it wrong, it has no value. The "technology wind" is a "strange wind" caused by information technology. In the "strange wind", various teaching methods emerge in endlessly, replacing old technology with new technology, replacing old technology with new technology, and replacing existing technology with new technology. Teachers and students become the experimental body of the technology trend. Online teaching has been developed for more than 30 years in China. Before the outbreak, it was mainly conducted in higher education and extracurricular counseling. However, with the global epidemic control, online teaching has provided new opportunities for primary and secondary schools. Although education and teaching have returned to normality, online education has not stopped because of the relief of the epidemic, but has taken advantage of the victory and started to conduct in-depth research on it, which is not lack of formalization and following the trend.

3. Analysis of the risk causes of online education in online schools

3.1 Differences in basic conditions increase the degree of inequality

Although there is no absolute justice, justice is a value

orientation of reform and improvement. According to an OECD survey, both developed and developing countries, due to the development of information technology and the popularity of the Internet, the educational gap between students has not decreased, but on the contrary, has become increasingly serious. The inequality in online teaching is reflected in all aspects. First of all, the premise of online teaching is to have basic infrastructure. In online teaching, due to the lack of sufficient resources, inequality is caused. According to the results of the questionnaire for the students with difficulties in online teaching in 2020, 2/3 of the college students feel that the problems in online teaching are related to the lack of network equipment, such as the lack of intelligent equipment, high network traffic costs, and poor network signals, which are all factors affecting the success of online teaching. At the regional level, such as the northwest, plateau and rural areas, the level of basic construction is poor. Secondly, the information quality of the subjects is related to the level of knowledge they receive. Some surveys show that there are one or more different social or cultural identities in online teaching, and the degree of computer and interconnection between them is not balanced. As the main object of education, the education quality of teachers and students directly affects the fairness of education. Teachers and students with good knowledge and ability can use online education more freely. At the same time, the level of parents' education is also related to the fairness of education. The higher the level of education, the better the promotion of online teaching. The basic elements of network teaching include basic infrastructure and personal information quality, which are related to the fairness of education, which is the prerequisite for realizing network teaching. The difference between the two is the root cause of inequality.

3.2 Quality problems caused by information literacy, management and resources

The quality of online education is the basis of ensuring online education. The quality of online education is multifaceted, including the information literacy of teachers and students, the supervision of various departments, and the resource construction. The information literacy of students and students is a necessary condition to realize the efficient operation of online education. The supervision of various departments comprehensively monitors the quality of online education, and the resource construction is a high-quality resource to ensure online education. First of all, the quality of online teaching depends on the information quality of teachers and students. The use of online teaching by educators is too simple and superficial, and the teachers "can't understand". The new teachers just focus on "using", copy the traditional teaching mode to online teaching, and simply make a simple transfer, without exploiting the role of this forum; Or separate the online education from the classroom, and only use a single teaching method, but can not fully explore its curriculum characteristics, so as to achieve effective integration. Students are at a loss in front of different platforms. They are distressed from the most basic operator level. The same screen hinders their normal study. The acquisition of online teaching resources and the use of personal space are closely related to the teaching quality of students. Secondly, the management of all industries is very poor. Without rules, there are no rules, so is online teaching. Nowadays, online teaching has been popularized to the point where all students can learn. Online teaching and learning can be carried out only by registering and applying

online. It is very easy for teachers to teach, upload resources, and students to learn. At present, China has not established a complete management system, and it also needs to strengthen management at the school and enterprise levels. Network teaching has a long way to go, which leads to the quality of network teaching. The teaching content and teaching content in network teaching are composed of teaching content and teaching content. Now the resources of online education are everywhere. As long as they can be uploaded, as long as they are available, they will compete with each other, especially in Chinese, math, and English, which are all kinds of majors, but the quality is strange.

3.3 Lack of face-to-face physical and psychological connection leads to the lack of feelings between teachers and students

"Learning anytime and anywhere" is the greatest advantage of online teaching, but also the greatest danger, which means that wherever you have equipment and the Internet, you can become a classroom. Without physical contact, both normal communication and emotional communication will be affected. The emotional interaction between teachers and students is not only limited to a picture, but also needs to experience and feel personally, so that students and teachers are immersed in it. Network communication not only separates teachers and students, but also affects network communication. Online communication mainly depends on the platform and the Internet. The students' information obtained by teachers from the Internet is restricted by the Internet, and because of the screen restrictions, they can only learn everyone's personal information from the Internet. In this way, we don't know what the students are doing or what kind of communication they want, which will make them feel distant and affect their teaching effect. Individualization and individualization of online teaching, lack of companionship of students, and lack of emotional feelings of participating groups. While communicating with teachers, we should also communicate and cooperate with teachers to obtain the exchange of feelings and thoughts. Even the friendship among students is built in the material world. However, online teaching has brought some problems to college students' communication, cooperation and emotional cultivation.

3.4 Errors in the concept of online teaching and insufficient understanding of the connotation of online teaching

The advent of the era of educational information has brought about the emergence of various educational technologies, from the government to teachers, are promoting and supporting online education. Some teachers keep pace with the times in their behavior, but their ideas have some deviations. In addition, some teachers' understanding of online education is limited to online teaching, without in-depth research on online education. First of all, online teaching is carried out in a mechanical way. Education departments and schools encourage teachers to take the initiative to carry out online education. Some teachers only use "machine" online education to meet the needs of teachers, but ignore the educational effect, and only care about whether it can meet the needs of schools, making online education only be used for "use". Secondly, there is a lack of understanding of the meaning of online teaching. Many front-line teachers' understanding of online education mostly comes from the forced exploration during the epidemic prevention and

control period. The real meaning of online education is not clear. In addition to the basic homework such as class and homework submission, the support of online education for education and teaching has not been fully explored. The quality of online education cannot be guaranteed due to insufficient understanding of the nature of online education.

4. Problems and solutions of online teaching in colleges and universities

4.1 Strengthening infrastructure and reducing regional differences

Network teaching is a prerequisite for the development of education in rural poor and remote areas. After the 18th National Congress of the Communist Party of China, the investment of the Chinese government in education informatization has continued to increase. By November 2020, the national network access rate of primary and secondary schools (including teaching points) has reached 99.7%. However, due to economic development, historical tradition and other factors, the technical conditions for conducting online education have not reached the same level as other schools. First of all, we should strengthen the investment in educational information resources in remote and poverty-stricken areas to ensure the stable and rapid operation of the network, so that students can learn smoothly and timely; Provide online education services for students and ensure the support of teaching facilities and equipment; Ensure that digital resources are fair and open, and realize high-quality sharing of resources. Secondly, targeted at areas, schools and students with difficulties in online teaching. The government, schools and teachers should thoroughly investigate and master the students' family conditions, and master the hardware and software resources they need for online teaching; By building a support system, we can provide support for the problems encountered in online teaching, eliminate the problems of "no learning" and "difficult learning", fundamentally eliminate the problems existing in online teaching, and realize the fairness of online teaching.

4.2 Improve intelligence quality and evaluation index

The basic condition for improving network teaching is to improve the quality and level of network teaching. The index of network teaching evaluation is the guidance of network teaching and the key to the high-quality development of network teaching. Network education refers to network technology, which is an important part of network technology. As the main participant in online teaching activities, we must improve our knowledge quality and improve the quality of online teaching. First of all, we should strengthen the quality training of teachers, and comprehensively improve the platform use, resource construction, teaching design, information retrieval, information recognition, information acquisition, information integration and other aspects. The training can be combined with case analysis and cooperative learning. In the process of teaching teaching methods, we should pay attention to the long-term, stability and pertinence of training, so that teachers and students can establish the concept of lifelong education. Secondly, to evaluate the teaching of online teaching, we must formulate a set of scientific teaching evaluation indicators. The evaluation standards of the countries with the fastest development

of online education in the United States have been gradually improved. For example, the K12 textbook jointly published by the National Standards for the Quality of Online Education (QM) and the Online Teaching Leaders (QM) has been revised three times. At present, the domestic evaluation of online teaching in primary and secondary schools is limited to one item, that is, the Evaluation Standard for Online Teaching Quality in Primary and Secondary Schools (Trial) of the China Information Technology Society, which is a new test. It can be seen that the formulation of evaluation indicators is a top priority. The formulation of this standard can draw on the relatively complete teaching standards, curriculum standards and project standards of the United States and other countries, and make reasonable adjustments according to the national conditions and the characteristics of primary and secondary students.

4.3 Pay attention to the planning of teaching process and give full play to the role of platform communication

The emotional communication between students and students in online teaching depends on the teacher's teaching plan and the role of online teaching platform. The integration of online teaching and online teaching can effectively solve the physiological needs between teachers and students. First of all, teachers should make accurate judgments on students' emotional requirements, and have emotional communication in class and in class. In the course design of online education, teachers can meet the emotional needs of teachers and students by designing classroom questions and group cooperation. At the same time, in the process of teaching, we should also take into account the teaching content and the characteristics of students, and link them with their own characteristics, so as to realize the emotional exchange between teachers and students, so that students and students can be free from physical loneliness. Secondly, educational institutions and companies should start with simply teaching students and students' emotional problems, and establish an interactive platform to realize the interaction and emotional sustenance between students and students, including interaction, after-class communication, class culture and other aspects, so as to eliminate the physical gap with students to the maximum extent, and let students and students find their own affiliation and affiliation on the network. The development of the platform is a necessary condition to achieve emotional communication, and it is possible with the help of teachers. On the basis of giving full play to the emotional communication between students and exploring the role of the platform, explore how to integrate the role of the classroom with the characteristics of the

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real classroom and classroom to form a positive and warm online learning atmosphere.

4.4 Change teaching concept and carry out network teaching in depth

Education is a dynamic and flexible activity, which changes with the difference of educational objects and teaching contents, and teaching tools and methods are naturally different. Network teaching is not a simple network teaching, but a reform of traditional teaching in terms of teaching methods and teaching concepts. Its content needs to be further explored by educators. A correct understanding of network teaching is a prerequisite for the correct implementation of network teaching. First of all, we should differentiate and analyze online education, and realize that online education is not omnipotent, and not all problems can be solved, but online education has injected new vitality into primary and secondary education in China. The implementation of network teaching is limited by the characteristics of students, teaching content and timing. We cannot rely solely on online education to achieve external needs, nor can we blindly rely on the effectiveness of online education, but we must blindly do online education at a reasonable level. Secondly, we should correctly understand the meaning of online teaching and deeply explore online teaching. Network education is an indispensable means of education in the new century. It is only an aid to the traditional classroom. For primary and secondary schools, comprehensive network education is no longer an ideal choice. However, online education is the focus of current education. The rise of online education has brought new opportunities for the development of basic education in China, and its learning methods and functions have brought new changes to the development of education. Therefore, we should deeply explore its connotation, make it flexible, accurate and reasonable in practical application, and make teaching effective.

5. Conclusion

The reform of online education in primary and secondary schools must go through long-term theoretical and practical discussions, and further improve it to make it have vitality and vitality. The impact of online education reform on education is a prerequisite to ensure the smooth development of online education. This paper analyzes the four problems and their causes in network teaching from four aspects, and puts forward corresponding countermeasures for these problems, hoping to provide some help for promoting the development and application of network teaching in China.