

Research on the Strategy of Applying Mixed Teaching Mode to Primary School Mathematics Teaching

Yixin Peng

College of Education and Sports, Yangtze University, China

Abstract: With the rapid development of science and technology in today's society, great changes have taken place in all aspects of human life. The education industry has also been continuously innovated under the impetus of information technology. The rise of network information technology has significantly improved the transmission amount and efficiency of knowledge, breaking the time-space boundary of education and teaching. It provides abundant educational resources and more convenient educational methods for education and teaching, which has a certain impact on the traditional educational methods. Driven by science and technology, the application of blended teaching mode is born, which is a new teaching method produced with the development of network information technology. The combination of online teaching and offline teaching is a revolution to the traditional teaching method. Under this background, primary school mathematics teaching must change the traditional teaching methods, take moral education as the fundamental task, and give full play to the important role of primary school mathematics curriculum in cultivating students' innovative ability and creative spirit. Combined with the attributes of mathematics subject and the practice of primary school mathematics teaching, the mixed teaching mode provides a new idea for primary school mathematics teaching, which is of great significance to the implementation and development of primary school mathematics teaching.

Keywords: Mixed Teaching Mode; Primary School Mathematics; Use Strategy.

1. Introduction

Blended teaching is a hot issue in the field of education. Many scholars in China have made a multi-angle discussion on blended teaching from multiple levels, mainly including the basic concept, application mode and practical operation of blended teaching three parts. Foreign scholars began to study blended teaching in the late 1990s. On the basis of the theory of blended learning, foreign scholars have discussed it from the aspects of connotation, mode and practice. After consulting relevant materials, this paper finds that many scholars have conducted a lot of discussions on the basic principles and application methods of blended teaching. However, due to insufficient analysis of the relationship and feasibility between blended teaching and specific subjects and specific objects, as well as the problems existing in various teaching situations and solutions to various teaching situations, the paper lacks consideration. Most of the research on blended teaching focuses on higher education and less on primary education. These are the areas that need to be further studied in the field of blended teaching. Through analyzing the application of mixed teaching mode in primary school mathematics teaching, this paper discusses how to carry out effective measures of mixed teaching. In order to promote the mixed teaching in education teaching better use, improve the efficiency of teaching.

2. The Application Value of Mixed Teaching Mode in Teaching

Blended teaching is a kind of teaching mode that integrates traditional classroom teaching and online teaching. It leads students' learning to deep learning by combining the advantages of the two forms of teaching organization. Therefore, mixed teaching mode has important application value in primary school mathematics teaching. By combining

the advantages of traditional teaching and online teaching, blended teaching can not only optimize the course content and improve the teaching level, but also innovate the teaching method and improve the evaluation system. At the same time, it can break the restriction of teaching time and space and enhance students' autonomous learning ability. This teaching mode can not only improve students' learning interest and enthusiasm, but also help them better understand and master math knowledge, and cultivate their self-study ability and problem-solving ability. At the same time, blended teaching also brings more opportunities and challenges to teachers, requiring them to have higher professional quality and teaching ability. Therefore, mixed teaching is the future trend of primary school mathematics teaching, which is worth our further exploration and practice.

3. The Application Case of Mixed Teaching Mode in Primary School Mathematics Teaching

X Primary School in D City conducted research on mixed teaching practice by taking "Throw One Throw", Volume 1 of Grade 5 mathematics in primary school, as an example. The application of mixed teaching mode in primary school mathematics teaching is divided into the following aspects:

3.1. Starting Session: Creating

The creation session is divided into three parts: micro-learning, pre-teaching test and task-driven, all of which are completed online, and the session is summarized and introduced into the learning of the course in offline teaching. The main purpose of the creation session is to create a problematic situation, stimulate students' interest in learning, and establish a task-driven approach.

3.1.1. Micro-learning

The teacher posts the micro-learning video of "Roll a Dice"

on the online learning platform and asks each student to complete the learning punch card. Through the micro-lesson video, students are helped to understand the characteristics of dice and the possible situations of dice rolling, and are shown how to record the results of dice rolling, so that students can initially perceive the activity of dice rolling and its possible results, and lay a good foundation for the completion of the learning tasks later on.

3.1.2. Pre-teaching Test

After completing the micro-learning, the teacher releases the teaching pre-test questions in the nail learning group, and the students complete the questions online and submit them as a way to test the students' knowledge reserves related to the toss, and design targeted teaching activities based on the completion of the students' teaching pre-test questions.

3.1.3. Task Driven

Before the lesson with the help of pinned learning group set up practice tasks - dice game: students roll two dice at the same time, the two dice face up the number and record and complete the activity table, according to the results of their own findings written out, and ask the parents of students to practice the process of recording video to share to the learning group, in order to facilitate the exchange of learning.

3.2. Centerpiece: Inquiry

3.2.1. Analyzing and Discussing

The inquiry session features two activities, one of which is: the teacher and students simulate a dice rolling game between Avanti and Master Bayi, and board the results. According to the result of the dice rolling, the teacher guides the students to think: why is Avanti winning? If we keep rolling, is it still 5, 6, 7, 8, 9 appear more often? Do the students want to give it a try? By these questions to lead students to discuss and analyze.

3.2.2. Designing a Program

Design a scheme for answering the question based on the question posed in the previous activity, the second activity of the inquiry session: divide the students into 12 groups of four and roll the dice 20 times in each group, dividing the results into two scenarios, A (5, 6, 7, 8, 9) and B (2, 3, 4, 10, 11, 12). Each group chooses a leader to record the results and group members are responsible for rolling the dice.

3.2.3. Collaborative Inquiry

In each group, group members take turns to roll the dice, and the group leader is responsible for completing the statistical table. Some students use paper and pencil to record, another part of the students use the tablet to record, and finally 240 times the two dice and the emergence of the situation made into a statistical chart, vivid image for students to feel the relationship between the data and changes, it is clear that the tablet record faster, more conducive to improving classroom efficiency.

Explore the link is the depth of the creation of the link, in the creation of the link to the students assigned to roll the dice, record the results of rolling the dice of the task, the students already have a certain degree of preparation, can promote the students to efficiently complete the exploration of the link in the grouping of the activities, is conducive to the completion of the established teaching tasks in the limited classroom time.

3.3. Key Session: Explain

Explanation of this link to the teacher-led, the use of a variety of methods and tools, to provide students with an

opportunity to show the results of their own stage of inquiry. In response to students' questions and some incomplete results, wrong conclusions and methodology of the existence of doubt, the teacher should be guided in time to explain the supplementary correction, so as to internalize the student's own experience of the activity. This link includes:

3.3.1. Sharing

Teacher: Why are the sums of A (5, 6, 7, 8, 9) more likely to occur when there are fewer of them, and less likely to occur when there are more of them when there are more of B (2, 3, 4, 10, 11, 12)? Discuss with each other at your table and express them in your favorite way. Teacher prompts students to convert each "sum" in groups A and B into the form of "plus + plus", and explains that one plus represents the number on the up side of one die, and the other plus represents the number on the up side of the other die. Students discuss in pairs the combinations of "and" in groups A and B and share their ideas with each other.

3.3.2. Summarizing Knowledge

At the end of the students' discussion and exchange, the teacher and students jointly summarize that there are 24 combinations of "and" in A (5, 6, 7, 8, 9) and 12 combinations of "and" in B (2, 3, 4, 10, 11, 12). The teacher evaluates the students' answers and guides the students to generalize their ideas and conclude that the more ways a sum can be combined, the more likely it is to be rolled.

3.3.3. Conceptualization

By leading students to think and discuss why A (5, 6, 7, 8, 9) has a higher probability of occurring with fewer sums, while B (2, 3, 4, 10, 11, 12) has a lower probability of occurring with more sums? Students will understand the concept of combination, explore the likelihood of events through the number of combinations, and then understand that the more combinations of sums, the greater the likelihood that it will be rolled. Use this part of the teaching to strengthen students' understanding of the two concepts of "combination" and "possibility", and link these two knowledge points to think about the likelihood of the event.

3.4. Core Link: Application

3.4.1. Knowledge Review

The teacher leads the class to review the two knowledge points of "ways of combining" and "likelihood" of an event, and guides the students to think about these two knowledge points together, so that the students can understand how the number of "ways of combining" can determine the size of the "likelihood" of an event. "The students will be guided to think about these two points in relation to each other, so that they can understand how to judge the likelihood of an event by the number of "combinations".

3.4.2. Consolidation of Application

In the practical application of this link in the design of activities: there are four number cards 6, 7, 8, 9, Cong Cong and Ming Ming to play the game of drawing cards, each person draws a card, multiply the numbers on the card, the product is a single digit counting Cong win, the product is an even number counting Ming win. Teacher: Please play this game with your table. Is this game fair? Why? Briefly say what you think.

3.4.3. Problem Solving

Students in groups of two prepared number cards, card drawing game, so that students feel the fairness of the game, in the process of the game students found that the product is

an even number of wins more often than the product is an odd number. After the game, the teacher asks the student representative to answer the question of whether the game is fair. The students first calculated the four number cards 6, 7, 8, 9 may get the result of the product: 42, 48, 54, 56, 63, 72, a total of six possibilities, five of the product is an even number, a product is odd, it is clear that Ming Ming is more likely to win than Congcong, so the game is not fair.

This link allows students to apply what they have learned and use what they have learned in this lesson to answer practical questions, which can not only test the students' mastery of the knowledge points in this lesson, but also deepen the students' mastery of the knowledge points in this lesson.

3.5. Consolidation Session: Expansion

3.5.1. Online Q&A

As classroom time is limited, teachers can hardly answer all the doubts of each student in the classroom, if students still have doubts after class, the school uses the Nail Learning Group as a platform for online Q&A, where students send their doubtful knowledge points to the Learning Group, and the teachers explain them and answer the students' doubts.

3.5.2. Post-lesson Exercise

At the end of the offline instruction, the teacher assigns a post-lesson activity: create a number game and think: Is this game fair? Please give reasons. After students finish creating the game, they will upload the game to the online learning platform, and the teacher will review it online.

3.6. Important link: Evaluation

3.6.1. Classroom Inspection

Teacher: What have we learned today? What did you understand through the dice-rolling game between Avanti and Master Baiyi? Point the student representatives to answer the content of the lesson. Grasp the students' mastery of the knowledge points in this lesson by pointing students to answer what they have learned in this lesson.

3.6.2. Online Test

Teachers upload practice questions on the online learning platform, and students complete the questions after class and submit them on the online learning platform for online review by teachers.

3.6.3. Three-dimensional Evaluation

Teachers evaluate students in the dimensions of knowledge and skills, process and method, affective attitude and values, and core literacy according to their performance in class and homework, and teachers give students extra points in the online teaching platform.

By applying the blended teaching mode to elementary school mathematics teaching, students can be guided to carry out orderly inquiry learning, and enhance their interest in learning, sense of inquiry, thinking ability, cooperative consciousness and inductive ability. At the same time, teachers can also get timely feedback on students' learning before, during and after class. The use of blended teaching mode in elementary school mathematics teaching has a great impact on teachers' teaching and students' learning, and this new teaching mode opens up new ways for elementary school mathematics teaching and gives birth to new teaching methods and means.

4. Suggestions for Improving Elementary School Mathematics Teaching Using a Blended Learning Model

The use of blended teaching mode in elementary school mathematics teaching has a great impact on teachers' teaching and students' learning, and this new teaching mode opens up new ways for elementary school mathematics teaching and gives rise to new teaching methods and means. The above examples of blended teaching model provide a good model for the implementation of blended teaching, from which we can get a lot of inspiration to guide the actual teaching.

4.1. Follow the Scientific Rules of Elementary School Math Teaching

Applying the blended teaching mode to the teaching practice of elementary school mathematics means that students' learning is divided into two parts, online and offline, in order to achieve good teaching results, improve teaching efficiency, and mobilize students' interest in learning, as a teacher, it is necessary to coordinate the two teaching links, online and offline, so that the two complement each other and promote each other, and systematically unify the online teaching and the offline teaching into a complete The online and offline teaching are systematically unified into a complete teaching process to jointly promote students' learning and teachers' teaching. The design of the two online and offline teaching links must follow the internal logic of the elementary school mathematics curriculum, do a good job of bridging online and offline education, and guide students to learn new knowledge in a gradual and orderly manner.

Through the above teaching case, the teaching process starts from the internal logic of the elementary school mathematics curriculum, and follows the six links of "creation, exploration, explanation, application, expansion and evaluation", guiding students to go deeper and deeper step by step, helping students understand the knowledge points, and then applying them on the basis of their understanding, which can better promote students' learning of knowledge. The school utilizes nail, small box homework and other software, plays the practice video of student representatives in class, etc., combines online creation and evaluation with offline teaching, perfectly connects online and offline teaching together, greatly improves teaching efficiency, and promotes education and teaching.

4.2. Supporting Schools and Students Lacking Hardware Facilities

First, at the national level, the state should implement relevant policies to strengthen educational support for less developed regions. The more economically developed regions should provide counterpart support to the less developed regions and share high-quality educational resources with schools in the less developed regions through various online learning platforms to help improve the quality of education in the region. At the same time, the governments of less developed regions should recognize the important role of blended teaching in the development of students' personality and innovation ability, etc., and appropriately increase the financial investment in the equipment required for the implementation of blended teaching, so as to create an environment for the implementation of blended teaching.

Second is the school level. Since there are also left-behind students with poor family conditions in economically more developed areas, schools should develop a series of educational programs to support the development of the blended teaching mode, and provide students with conditions that support blended teaching as much as possible. For example, schools can use computer room equipment for students to carry out online learning, and schools with sufficient financial resources can set up special classrooms to support blended teaching and so on, so as to provide hardware support for the development of blended teaching.

4.3. Strengthening Teachers' Information Skills Training

Blended teaching mode is a new type of teaching mode emerging in recent years, but most teachers do not have experience in blended teaching, especially older teachers with weak information literacy, and there is little training in this area in the pre-service training of teachers. In order to give full play to the promotion of blended teaching mode on education and teaching, we should do a good job of teacher training, so that teachers have the appropriate information skills. A complete training system and program should be set up for the training of teachers' information skills. First of all, teachers should be guided to establish a new era of education, change the traditional concept of education and teaching, so that they realize that in the era of information technology needs to focus on cultivating students' subjectivity and creativity, and the teaching method should keep pace with the times; secondly, the school can hire teachers who have had the experience of blended teaching, experts, etc. to share their experience with the school teachers to guide the blended mode of teaching in the actual teaching and learning process, and to help the school teachers understand the advantages of using the blended mode of teaching. Secondly, schools can hire teachers and experts who have experience in blended teaching to share their experiences with teachers, guide them in the application of blended teaching mode in the actual teaching process, and help them to understand the various aspects of the blended teaching mode, how to connect the various aspects, how to choose the appropriate teaching methods, as well as to introduce the functions of the online platform and its operation methods, etc. Thirdly, schools can make use of the school's information technology teachers as IT instructors, who are specialized in providing one-to-one guidance in detail for the teachers who have relatively weak information literacy, so as to make them skilled in the operation of online teaching systems. Thirdly, schools can utilize their information technology teachers as IT instructors to provide detailed one-on-one guidance to teachers with weak information literacy, so that they can operate the online teaching system skillfully. Finally, teachers can be assessed and randomly checked on a regular or irregular basis, and teachers can be organized to share their experience of using blended teaching, learn from each other and make progress together.

4.4. Strengthening Home-School Cooperation to Create a Learning Environment for Elementary School Mathematics

Elementary school students have poor self-control ability and are easily distracted by external interference, and most of the students' online learning takes place at home, without the supervision of the teacher, many students will easily be

tempted by other things other than learning, and it is difficult to concentrate on learning, which will make the effect of online education greatly reduced. Therefore, under the blended learning model, students' online learning needs to be supervised and controlled to help students focus their attention. In order to ensure the quality of students' online learning, schools should strengthen cooperation with students' parents, coordinate education, cooperate with each other, form a good educational synergy, and jointly create a learning environment for elementary school mathematics. Teachers should strengthen communication and cooperation with parents, communicate the tasks of each lesson to students' parents in a timely manner through the parents' WeChat group, strive for the cooperation of parents, and let parents do a good job of supervising and monitoring the online learning session, in order to ensure that students efficiently complete their learning tasks.

5. Summary

After an in-depth exploration of the use of blended teaching mode strategies in elementary school mathematics teaching, we can clearly see its significant advantages and potential in teaching practice. Blended teaching not only enriches teaching methods and increases students' interest in learning, but also plays an important role in cultivating students' independent learning ability, innovative thinking and problem-solving ability. However, the promotion and implementation of blended teaching mode still faces some challenges, and we need to continue to strengthen the research and explore more scientific and effective teaching strategies. At the same time, attention should also be paid to the popularization of hardware facilities and the importance of teachers' information skills training to ensure the smooth implementation of blended teaching. Looking into the future, with the continuous progress of information technology and the constant updating of educational concepts, blended teaching will play a more and more important role in elementary school mathematics teaching. Let's work together to build a more efficient and high-quality elementary school mathematics teaching environment and cultivate more students with innovative spirit and practical ability.

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