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Review Article

Research on the Teaching Situation of New Mathematics Curriculum in Primary Schools

Yongwei Yang*, Xiaoying Xie

School of Mathematics and Statistics, Anyang Normal University, Anyang, China

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***Corresponding author:** Yongwei Yang

Abstract

Introduction: Under the background of the new curriculum reform in basic education, students and teachers will jointly improve classroom efficiency under the guidance of the new curriculum concept. This article mainly takes the implementation status of the new primary school mathematics curriculum reform in Yucai Experimental School of Shuiye Town as the research object. Some results and existing problems of the new curriculum reform of the elementary school are obtained through the investigation and study, and some suggestions are put forward.

Keywords: New curriculum reform, Mathematics teaching, primary school student, Classroom role.

INTRODUCTION

Primary school mathematics teaching focuses on the cultivation of students' logical thinking ability, and mainly train's students' thinking by finding problems, analyzing problems, and solving problems [1]. As the carrier of teaching, curriculum is the main way to carry out teaching activities and achieve educational purposes, and the "student progress" under the new curriculum concept of primary school mathematics involves three dimensions: knowledge and skills, process and method, emotional attitude and values [2]. The viewpoint of "society is school" put forward by Tao Xingzhi, an educator in our country, tells us that the materials, methods, tools and environment of education should be increased. The educational content should be in line with the reality of life, the students' ideological understanding should be in line with, teaching, learning and doing should reach the realm of unity [3]. The new curriculum reform in primary school is put forward in view of the disadvantages of traditional examination-oriented education, which is of great significance to promote the all-round development of students and promote quality education in depth, so it has aroused widespread concern of the whole society [4].

Facing the new curriculum reform, how should the school teachers and students deal with? Aiming to the above problems, we investigate and analyze the implementation of the new mathematics curriculum in the Primary School Department of Yucai Experimental School in Anyang City. These works are of great significance to the effective implementation of the new curriculum reform and the primary education reform of primary school: (1) It is helpful to understand the implementation and future development of the new curriculum in Shuiye Experimental School; (2) To help teachers combine the new curriculum reform with their own teaching situation, so as to improve the teaching level; (3) To help students understand the learning goals and requirements of the new curriculum reform, so as to improve their learning ability.

RESULTS AND FINDINGS

In order to understand the teaching effect of primary school mathematics after mastering the new curriculum reform, the authors conducted interviews or questionnaires to 70 students in the sixth-year students and the 60 students in the fifth-grade school of Yucai Experimental School in Anyang. By talking with the 9 teachers, we understand that teachers' cognition of the new curriculum reform is relatively optimistic. Teachers can calmly cope with the control of the teaching materials after the new curriculum reform and the difficulty of teaching progress. Through the questionnaire, the degree of adaptation of the students to the new curriculum reform demands is not optimistic; through observation in the classroom, the teachers and students in the class can change the character quickly.

Cognition and Improvement of Primary School Mathematics Teachers to the New Curriculum

The main results are as follows:

(1) Primary school mathematics teachers are optimistic and positive about the new curriculum reform teaching. Through the interview with the teachers, we learned that the new curriculum reform can be taken seriously by leaders. The primary school mathematics teachers in Yucai Experimental School are optimistic about the implementation of the new curriculum reform. Teachers actively participate in various training activities organized by the school and new curriculum reform training, and the school organizes excellent new curriculum reform observation courses for teachers to carry out teaching reference. In addition, around the teaching activities of the new curriculum reform, the director of the mathematics group of the primary school department organized the mathematics teachers to carefully study the syllabus after the new curriculum reform, and compared and analyzed the syllabus before and after the new curriculum reform. At the same time, it analyzed the differences between the new teaching material system and the old teaching material system, and made a concrete analysis according to the specific situation of the students.

(2) Teachers fully agree with the teaching material system after the new curriculum reform. Through this interview, we learned that most teachers are relatively clear about the structure of the textbook after the new curriculum reform, and are proficient in the new "Mathematics Curriculum Standards" and the "understanding, understanding, mastery, and flexible use" of the textbook in requirements [5]. After the new curriculum reform, great changes have taken place in the architecture of teaching materials, such as "space and graphics", "numbers and algebra", especially the content of "practice and comprehensive application" in teaching materials has aroused students' interest in learning [6].

(3) Teachers can master the difficulty and progress of teaching after the new curriculum reform. Many teachers put forward that the exercises after the new curriculum reform are difficult and have many types of questions, but the types of examples in the new teaching materials are relatively small, the difficulty is small, and the students at the middle level have difficulties in solving the exercises, which will undermine the confidence of these students to learn mathematics well. In addition, the teaching materials after the new curriculum reform have high requirements for students in the aspects of basic knowledge, skill training and thinking innovation, but most teachers think that the problem-solving skills involved in the new teaching materials are insufficient and still need a lot of supplement to the students**.** In order to master the skills and methods of problem solving, students must practice a lot of exercises, but this will increase the workload of teachers and violate the original intention of heuristic teaching.

(4) Teachers' methods of classroom teaching are constantly improving. In this survey, we understand that the new mathematics teaching concept suitable for the 21st century will be formed with the deepening of the new curriculum reform. In traditional teaching, it is the teaching mode where the teacher teaches students to listen. After the new curriculum reform, the students become the masters of the classroom and can really participate in the classroom teaching, no longer just listening and not thinking. Most mathematics teachers can realize that the popularization, foundation and development of the curriculum should be emphasized after the new curriculum reform. In addition to the simple teaching of mathematical knowledge, teachers in mathematics classrooms need to use real-life mathematical activities to help students understand and master mathematical knowledge in the process of cooperative communication and autonomous exploration. After the implementation of the new curriculum reform, most teachers have become organizers, guides and collaborators of classroom teaching. At the same time, the correct use of multimedia courseware will make the abstract content vivid and interesting, which greatly improves the teaching efficiency.

(5) Improvement of teachers' conception of the new curriculum. Before the curriculum reform, the traditional classroom teaching content was completely determined by the teaching materials. However, the classroom teaching after the new curriculum reform advocates changing "teaching materials" to "using teaching materials" instead of being slaves to teaching materials, which fully reflects the idea that teachers and students jointly promote the development of curriculum in the course of teaching. In classroom teaching, most teachers break the traditional mode of pure mathematics teaching, such as splicing the learned graphics into a picture after the students have learned the "understanding of graphics ", which not only consolidates the knowledge they have learned, but also improves the students' self-learning ability and innovation ability [7].

(6) Improvement of student training methods. The new curriculum reform advocates the way of self-learning, cooperative learning and exploratory study. From the situation of this this survey, the majority of teachers gradually accepted this concept. For example, in the course of teaching with mathematics, teachers lead students to participate in extracurricular activities, collect information and raise relevant mathematical problems. The change in learning style has allowed students to dare to raise new questions and express different opinions.

(7) The improvement of classroom evaluation. Since the implementation of the new curriculum, the single evaluation of teachers in the classroom has changed to a variety of interactive evaluation, such as students can actively stand up to answer questions, even if the answer is wrong, but the learning attitude is worthy of affirmation.

Students' Learning State and Learning Effect after the Reform of the New Curriculum

Through the survey, we learned that the attitudes of fifth and sixth graders of primary school towards learning mathematics, examination and homework need to be improved. Students truly inform their own gains and setbacks in mathematics learning and objectively reflect their ideas. The main contents are as follows:

(1) students' attitude towards mathematics is not optimistic. Among them, 20% of the respondents were confident of learning mathematics well; 60% of the respondents had difficulties but were willing to learn in the process of learning; 10% of the respondents were unwilling to learn; and 10% of the respondents were tired of mathematics. It can be seen that few students have confidence in mathematics and do well. Most students have difficulties but are willing to learn. However, there are still a small number of students in a state of entanglement, they lack of confidence in learning math well, and 1/10 of the students arebored with mathematics courses.

(2) Examination phobia can easily inhibit students' passion for mathematics. Among the respondents, there are sixth graders in the primary school who have more regular exams. It was found from the survey that 80% of the students hated exams, 10% of them had pre-exam syndrome and insomnia, and only 10% of them were able to adapt to the intensity of the exam. The teachers believes that if it is difficult to take the test normally, the entrance examination will be more handy, but they do not know the negative effects.

(3) The math burden of the students has exceeded their ability. Only 42% of the students thought that the burden of studying mathematics can be easily dealt with, and 58% of students felt that the burden was heavy, and homework was one of the main reasons for the heavy burden. According to the survey, the assignments are far beyond the students' current ability. 60% of the students are able to think independently to complete the homework, 34% do not want to think, and they hope that the topics can be calculated directly with formulas, and 6% of the students copy the work of the outstanding students to complete the teachers' assigned tasks quickly.

Changes of Teacher-Student Relationships after the New Curriculum Reform

Through observation in the classroom, we can find that the traditional classroom teaching adopts the teaching method of "teacher lecture, student audio-visual", which is the common "relationship between teaching and receiving" between teachers and students. In order for teachers to better teach knowledge, there are often two-way exchanges between teachers and students. Through the new curriculum reform, many teachers have new insights into the relationship between teachers and students. In the teaching process, a new type of teacher-student relationship has been created to fully demonstrate the student's main role and return the initiative to learn. The meaning of the master of learning. In the process of teaching, teachers can change their ideas and return the initiative of learning to students, so that students can say a variety of ideas and get good teaching results. In classroom teaching, the teacher always said "Please tell the teacher" when asking the students to speak. When the students couldn't answer, the teacher would accuse the students of "sit down!" And now it's more like "Please tell your classmates". When the students can't answer, the teacher encourages the students.

RECOMMENDATIONS

Self-experience

After this investigation and research, we have benefited a lot. we have learned a lot of teaching experience and learned about the role and orientation of teachers and students in the classroom, but at the same time, we have also found the following problems:

(1) There will be distortions in the evaluation of students' learning. The new curriculum reform advocates teachers to encourage students, so in the classroom, what is often heard is encouraging evaluation. If these students do make significant progress, such praise is appropriate, but some students answer too simply, then such evaluation is contrary to the original intention of the new curriculum reform.

(2) From the point of view of quality education, we should understand the significance of classroom teaching research. The implementation of quality education is a combination of theory and practice, and the study of new classroom teaching practice is an important way to implement quality education. The teaching mode after the new curriculum reform requires the gradual transition and development from the theoretical level to the practical level. For the research of teaching mode innovation, we should adhere to the principle of letting a hundred flowers bloom and a hundred schools of thought contend, so as to promote the in-depth development of quality education.

(3) Deal with the relationship between cooperative learning and independent thinking. In order

to promote the learning mode of cooperative learning in the new curriculum reform, the teacher should provide the students with the opportunity to cooperate and study in the classroom teaching, so that each student can express their own views. However, students' independent thinking ability should also be strengthened in the process of promoting cooperative learning. Therefore, the teachers should give clear goals and tasks before the group cooperative learning, so that the students can think in the real situation and communicate in the problem solving, so as to obtain more information and to listen to different opinions.

Some Suggestions for the School

(1) Young teachers should strengthen the training of basic teaching skills in the classroom teaching of the new curriculum. The main force of education in the 21st century is young teachers, so on the shoulders of young teachers, they carry the hope of Chinese education. Our young teachers must not only have solid basic teaching skills, but also have advanced teaching ideas and concepts [8].

(2) To create a good teaching environment. The teachers' working treatment, working conditions, teaching equipment, class style and so on are included in the teaching environment. How to make all the above factors in a good state? First of all, we must build a comfortable environment and improve the work welfare of teachers. Secondly, according to the teaching needs of the subject, the schools should improve the equipment condition and add the teaching facilities, so as to play the auxiliary role of the teaching equipment. In addition, the class environment has a great influence on the students' learning and life, and the teachers should pay attention to keeping the school discipline and the class good atmosphere, and create a good environment for the students' study and life.

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