

Research on the Current Situation and Countermeasures of Living Mathematics Teaching in Primary Schools

-- Taking M Primary School as an Example

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Abstract: In the context of the new curriculum reform, the focus of the basic curriculum reform is described as "teaching is the content of life, and learning is the way students live." The new curriculum reform proposes that the living of mathematics teaching can improve students' learning efficiency, cultivate their ability to learn and use, and stimulate their love for mathematics. This study is based on the theories of educators such as Dewey, Tao Xingzhi and Frei et al. Tal, based on the M school for case study, using the literature method, observation method and interview method, through the interviews with nine mathematics teachers and classroom observation, to understand the problems of living teaching in this school, this paper is divided into four parts except the preface, and puts forward corresponding countermeasures for living teaching.

Keywords: Elementary School Level; Living Teaching; Improvement Strategy.

1. Introduction

Life-oriented teaching is an important part of the new curriculum reform. Teaching needs to pay attention to the students' personal life experience, return to the students' actual life of mathematics education, this paper mainly M elementary school as an example of research, to understand the elementary school in the process of teaching mathematics curriculum implementation of the status quo, for the existence of problems, analyze the reasons, on this basis, put forward targeted improvement measures, with a view to finding new ideas and new methods of living teaching of elementary school mathematics through practical exploration, and improve the teaching quality. It also provides a reference for the implementation of mathematics teaching in other elementary school in the city.

2. The Survey on the Current Situation of Living Teaching of Mathematics in Elementary School and the Existing Problems

Founded in 1905, M Primary School has 37 teaching classes, more than 2,400 students and 162 staff members. In 1997, M Primary School was recognized as an experimental school of art education in a city. "Learning, thinking, cooperating, and innovating" are the school's learning styles that have been developed over the years. This study takes Primary School M as the object of research, hoping to have a deeper understanding and comprehensive knowledge of the living mathematics teaching in Primary School M with the help of classroom observation and interviews with elementary school mathematics teachers.

2.1. Results of the Survey on the Current Situation

The author made observations and records of five quality lessons and eight regular lessons conducted by nine mathematics teachers in the sample class, conducted interviews with the teachers of the school after the lessons, and made observations and records of the teaching of living in the curriculum in terms of the creation of teaching contexts, the selection of teaching contents, the handling of the teaching process, and the reflection of the teaching results by the mathematics teachers.

2.1.1. Knowledge about the Concept of Living Teaching and Learning

Through interviews with nine frontline mathematics teachers, it was found that the sample school's had a certain understanding of the concept and approach of living teaching, and were able to carry out living teaching in practice, but were lacking in theory. They understand living teaching more through their life experiences or teaching experiences, and have not been exposed to professional theoretical training or in-depth research, which is a relatively common problem among elementary school frontline teachers.

2.1.2. Teaching Practice about Living Teaching

When teachers were asked, "Do you think you can implement living teaching in mathematics?" Most of the teachers said that as an elementary school teacher, much of the knowledge content in the textbook is closely connected to life. However, teachers can be confused in the practice of living teaching, for example, Mr. M4 said, "Students all have different home environments and time backgrounds. There are different understandings of what we are talking about, for example, the last time I talked about RMB rounded corners and cents in class, then many students actually don't have the concept of 'cents', all they come into contact with are coins." Ms. M5 said, "Every child has different experiences, when I

taught Speed, I intentionally mentioned that students should pay attention to the road signs on the road, but some of them didn't observe or pay attention to it carefully, so this introduction was not understandable for some students." Through the above interviews, it was found that M elementary school mathematics teachers would encounter corresponding problems in the practice of teaching mathematics living, so teachers need to make continuous efforts to improve the effectiveness of classroom design.

2.2. Problems

2.2.1. Teaching Objectives Fail to Reflect Life

The Traditional concepts of education still influence teachers' understanding of teaching objectives. In terms of objectives teachers focus more on knowledge transfer and more on students' learning outcomes. Especially in the learning of mathematics. Through interviews and observations we can see that little consideration is given to life-oriented goals in the primary teaching goals of the school, let alone actually achieving them, and more goals are just to master knowledge and improve mathematical arithmetic skills. However, linking the objectives with life is more conducive to the development of students' scientific spirit and thinking ability.

2.2.2. Teachers Lack the Theoretical Basis of Life-Oriented Teaching

Teachers are the main body of classroom teaching, and from the interviews, we can learn that many frontline teachers are lacking in theory, even though they are able to carry out living teaching in practice. They understand living teaching more through their experiences in life or teaching experience, which is a more common problem among elementary school frontline teachers.

2.2.3. Teachers' Classroom Implementation is Detached from Livingization

The first is that the introduction session is formalized; the second is that the relationship between the teaching style and living-in is not properly handled. Through interviews with various mathematics teachers in School M, it was learned that the teachers in the school had a single form of after-school homework assignment, most of which were exercise books, test papers or after-school exercises, which did not achieve the practical significance of life-oriented teaching.

2.2.4. Teachers do not Pay Attention to the Evaluation of Teaching and Learning.

Teaching evaluation is the measurement, assessment and analysis of teachers' teaching activities and their results based on certain objective criteria. Through classroom observation and interviews, it was learned that in elementary school M, although most teachers accepted the new evaluation concept and paid attention to developmental evaluation, in practice, due to the constraints of many factors such as the pressure to advance to higher education, the students' academic performance was still used as the assessment criterion.

3. The Analysis of the Reasons for the Problems of Living Teaching of Elementary School Mathematics

3.1. Teachers' Traditional Education Concepts are Deeply Rooted

Since the creation of education, the concept of education

has been constantly updated and changed. Especially the more experienced old teachers, they rely more on their own teaching experience, not to break through the authority of the traditional way of education. On the one hand, they are not willing to accept new concepts of education; on the other hand, they have a single teaching style. Teachers can only set up the educational concept of lifelong learning so that they will not be drowned by the flood of the times of education.

3.2. Lack of Systematic Theoretical Learning and Training on Life-Long Teaching in Schools

From the interviews with all the mathematics teachers and the actual observation of classroom teaching, it is clear that the teachers do not have a solid enough theoretical foundation for living teaching and are vague about the concept of living teaching. First, the school did not conduct professional training on the theory of living mathematics teaching. Secondly, teachers themselves do not take the initiative to learn the relevant theories, and many of them do not have a strong concept of individual professional development.

3.3. Characteristics of the Complexity of the Teaching Profession

Teachers' labor is complex and creative. Complexity is manifested in the following ways: first, the situation of students is complex. Secondly, the teacher's tasks are diverse; thirdly, the factors affecting students' development are diverse, so the teacher's labor is very complex. Secondly, teacher labor is creative; finally teachers play diverse roles. From the interviews, we can learn that many teachers show that they do not have the energy or ability to teach life-based teaching:

3.4. Teachers' Improper Evaluation Goes Against the Essence of Living Teaching

Children in elementary school are in a special period of physical and mental development, with limitations in their thinking, and they are often very aggressive and eager to receive praise from teachers, parents and classmates. Teachers may take extreme ways to treat some of the less receptive students and adopt a sea of problems to keep up with the progress, which is totally against the essential requirements of quality education under the new curriculum reform.

4. The Countermeasures of Living Teaching of Elementary School Mathematics

4.1. Teachers Set up the Correct Concept of Life-oriented Teaching

The premise of all correct practice is scientific theory. We must find the connection point between them. "Bringing in" and "sending out" is a closely connected bridge, and both ends must be balanced.

4.1.1. Read Books about the Theory of Life-based Teaching.

If you want to set up a correct concept of living, you must first understand the theory of living teaching. Teachers can read Tao Xingzhi's and Dewey's books on the theory of living teaching, add their own thoughts in the process of reading, and deepen their understanding of living teaching in the reflection. In this way, teachers will have the courage in their

hearts, so that they can have life in their hearts and quote the materials in life.

4.1.2. Utilize the Internet Information Network to Update the Concept

As a teacher, we should keep pace with the times and have the ability to collect information and distinguish between right and wrong. Learning the concept of living teaching is for their own professional development.

4.2. Schools Carry out Systematic Training and Give Teachers Support for Teaching and Research

As the main force of teaching in schools, teachers' teaching concepts and levels directly affect the whole school's teaching atmosphere and students' learning environment.

4.2.1. Orientation Training

In the analysis of the results of the interviews and classroom observations, it can be found that M elementary school mathematics teachers have different problems with living teaching and distinguishing their specific problems. Need to master the theoretical basis of livingization. In teaching practice, they do not know how to introduce effectively, how to make classroom materials, how to refer to living teaching materials, etc. They need to learn from excellent teachers on the basis of their knowledge of constructivist theory. This saves energy and improves the efficiency of training.

4.2.2. Mutual Help between the Old and the New

From the interviews, it was learned that older teachers in Primary School M were more experienced in teaching and therefore tended to be more effective in their teaching, but newer teachers, although less experienced, tended to be innovative. Therefore, the school should consider the whole situation and pair up new and old teachers. For example, the group will be in an office or dormitory. In the process of new and old mutual help, communicate with each other in time, carry out seminars, and adjust the strategy at any time in the process. Regular evaluations are conducted to stimulate teachers' interest in teaching and research and enthusiasm for work.

4.3. Enhancing the Level of Implementation of Living Teaching by Teachers

4.3.1. Handling the Relationship between Teaching Content and Living Education

Tao Xingzhi's theory of life education emphasizes that the teaching content should be related to the actual life of the students, and teachers should consider the following aspects: firstly, the students can combine it with their own life experience; and secondly, it can help the students to improve their mathematical ability. Mr. Ye Shengtao once said, "The textbook is only an example. It is only an important tool and means for our teaching, not the purpose and destination of teaching. The first is to pay attention to life and transform examples in life into materials for teaching mathematics; the second is to pay attention to children and understand students' unique experience and inner world; the third is to organize diverse and energetic classroom forms. The fourth is to assign life-oriented homework so that students can apply their knowledge in practice.

"Acting is the beginning of knowing" and Dewey's "doing middle school" can be understood by arranging mathematical assignments with the meaning of life. Living homework can

be based on the teaching content and the actual situation: for example: in the study of units of length in the classroom, the teacher should first help students understand the basic concept of units of centimeters, after the class arranged for the students to go home to measure the length and width of their own home table, if you want to give the table to do a piece of tablecloth of the same size, what data should be measured? In the next lesson students answer the measurements related to their own tables at home.

4.4. Focus on Developmental Evaluation to Assess Students' Comprehensive Ability

Dewey's pragmatism and Tao Xingzhi's educational ideas in education evaluation are aimed at the development of students, society needs more comprehensive quality talents, scientific and reasonable teaching evaluation for promoting life teaching is of great significance.

4.4.1. Diversification of Evaluation Subjects

Elementary school students are the basic stage, all the individual factors affecting the overall development of students should be included in the evaluation of the main system. First, the evaluation of peers, peers are the most familiar with individual students, their thinking and feelings are the most empathetic; second, the evaluation of parents, parents are the most familiar with their children's performance at home, so it is an important part of the evaluation; third, the evaluation of their own, although elementary school students have limitations in their thinking, but the evaluation of their own can be cultivated from a young age to cultivate their introspection ability to help them learn to know themselves and have self-knowledge ability. Learn to know themselves to have the ability of self-knowledge. Help them to develop comprehensively and grow up healthily.

4.4.2. Comprehensive Evaluation Index

Gardner's theory of multiple intelligence suggests that human intelligence is diversified and there is no uniform standard to evaluate whether a student is smart or not. Therefore, we should not only pay attention to students' academic performance, but also pay attention to students' civilized manners, ability to communicate with others, ability to cooperate and communicate, and their performance in speech, painting or other activities. In the classroom evaluation should not be limited to the acceptance of learning ability, only evaluation "you are really smart" or "you calculate really fast", but should be a comprehensive view of the students, such as "your idea is great! Instead, we should look at students in a comprehensive way, for example, "You have a great idea", so that students can feel that mathematical thinking is open.

4.4.3. Diversification of Evaluation Methods

The After the new curriculum reform, teaching evaluation methods tend to be diversified. It can be done through, for example, diagnostic evaluation can have a basic understanding of the students, followed by the file bag evaluation. First, the teacher can play the function of diagnostic evaluation with the help of usual homework. Secondly, teachers should carry out formative evaluation and emphasize qualitative evaluation. Evaluate students' performance during the teaching process and emphasize the process of students' learning. Third, the establishment of student growth record bag, all subjects can participate in the evaluation, collect evidence and information of students' performance.

Teachers to take a variety of evaluation methods, in line with the original intention of quality education, and effectively promote the practice of teachers living teaching.

5. Conclusion

This study takes M elementary school as an example for research, to understand the status quo of curriculum implementation in the process of mathematics teaching in this elementary school, to carry out a new inquiry by understanding how to penetrate the living concept in this school, and to discover the advantages and problems in the process of teaching implementation and analyze the reasons for them by combining with specific teaching examples. In terms of theory, learning and borrowing from western educational ideas in the living teaching theory, in the process of inheritance and development to establish a scientific living teaching theory guide. It also puts forward targeted improvement measures, with a view to exploring new measures through practical inquiry to enhance the teaching efficiency and overall quality of elementary school mathematics classrooms. It also provides a reference for the implementation of mathematics teaching in other elementary school in the city.

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