A Brief Discussion on the Connection between Junior High School Mathematics and Primary School Mathematics

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***Abstract*：** *Junior high school mathematics curriculum is basically in elementary mathematics curriculum design, but the current elementary school mathematics curriculum and junior middle school mathematics curriculum still appear decoupling.This situation also reflects that the docking problem of mathematics curriculum in primary and secondary schools has not been paid great attention, which is a lack stage of China's education informatization.Starting from the new curriculum standards, the primary and secondary school mathematics teaching research and practice, not only contribute to the compulsory education stage of mathematics curriculum goal, or subject teaching to carry out the "scientific development", is committed to achieve the goal of compulsory education stage, makes different people get different development in mathematics.*

Keywords: *primary and secondary school mathematics; teaching connection; problems; countermeasures.*

I. Introduction

Considering the key content of the new curriculum reform and innovation, the purpose of studying and coping with the docking problem of mathematics culture and education in primary and secondary schools is to promote the harmonious development of students' mathematics learning. From the perspective of the new curriculum standard, the research and practice of the docking problem of mathematics culture education in primary and secondary schools can not only promote the comprehensive realization of the mathematics curriculum goal of basic education, but also be the reflection of the "scientific development concept" in the subject culture education. It is also an attempt to achieve the goal of compulsory cultural education: to develop mathematics in different people.

From the teacher's perspective, the exploration of primary and secondary school mathematics docking and experiment can improve the teacher's teaching ability and teaching level, through the classroom teaching methods of independent innovation, primary school teachers can also grasp some junior middle school mathematics problems, thus make middle school teachers understand the content of elementary mathematics, promote scientific docking between mathematics teaching of primary and secondary schools, promote two levels of teachers through the way and teaching content, maximum reduce docking problem, to make the teacher better reflect its core effect.

On the student side, it can promote rational learning. In the mathematics course, middle school teachers prepare connective professional knowledge in the whole process of classroom teaching, so that the students who have just entered the junior middle school can immediately enter the learning situation, and there is a good connection between them, which can greatly improve the learning efficiency of students and promote reasonable learning.

II. The importance of the connection between primary school and middle school mathematics teaching

As the key course of nine-year compulsory culture education, mathematics curriculum in primary and middle schools is the basic curriculum significance to cultivate the quality of primary and middle school students, cast students' abstract logical thinking, independent innovation understanding, logical judgment and independent innovation ability, and promote the development of feelings, mentality and life values of primary and middle school students. The "New Curriculum Standards for Mathematics in Basic Education" (2011 edition) requires nine years of cultural and education time, which is divided into three links.

III. Analysis of primary school and middle school mathematics teaching connection problems and causes

3.1 Teacher level

Lack of understanding of curriculum standards, and not digging deep into textbooks： Since the implementation of the new curriculum standard, many teachers have not clearly realized the necessity of classroom change, and they are still used to the traditional mathematical concept [2] in the past. They can not deeply reflect on the new curriculum specification, does not reflect the compulsory culture education link details of mathematics teaching, and not enough to realize the detail of primary and secondary school mathematics professional knowledge, do not attach great importance to the professional knowledge of primary and secondary schools, scattered learning new curriculum standards, so it is impossible to give sufficient high attention to the contact and docking between each academic section.

Differences in teaching methods, no flexible choice of teaching methods： Classroom teaching method refers to "the teaching procedures and procedures followed by teachers and students under the manipulation of special course content and cultural and educational objectives, which is the standard management system to specifically guide and negotiate the whole process of culture and education". In primary school, due to the memory of primary and middle school students memory mechanical equipment as the leading factor, thinking method dominated by the actual visualization, the teacher in the classroom visualization brand image, usually in the classroom slowly, small classroom volume, attaches great importance to the primary and middle school students' professional knowledge and simple use, primary and middle school students before learning new training. The teacher interprets every training, and constantly pays attention to the key and difficult areas. In junior high school, the amount of professional knowledge is larger, the vision of learning is wider, and the concept is more and more abstract. In the junior middle school mathematics class, the difficulty coefficient of learning not only depends on the memory professional knowledge project, but also depends on the further analysis and understanding of professional knowledge [3].

Teachers lack of communication and do not exchange and learn from each other： There is a lack of communication between primary and secondary schools, and very little communication between primary and secondary school teachers, resulting in each other not knowing the other's specific teaching practices on the other side. The result is a wide range of "closed", middle school teachers can not grasp the content and regulations of primary school curriculum, and primary and secondary school teachers also do not understand the junior middle school curriculum, constitute the "railway police, each tube each" situation. This leads to the situation of the railway police. The cultural education of primary and secondary schools is divided into two levels, resulting in poor communication between primary and

secondary school teachers, fragmented ways of curriculum learning, and great differences in teaching and management methods. All of these elements affect the connection between teaching and learning at a certain level.

Differences in management methods, not guiding students to adapt to： Primary and middle school students rely on teachers is very strong, teachers are generally squatting class management, management of students. Primary and secondary school teachers are very careful and comprehensive, in essence, is management, a large number of "support", is a kind of "nanny". Elementary school students rely on their teachers, and the content is limited due to the small total number of classes. In junior high school, teachers, students and learning environment do not understand, teachers from the work at a selected spot to the take charge of a class, basically use the semi-open management method, the active right back to the students. In the whole process from "help" to "release", the lack of specific guidance for students [4].

3.2 Student level

Poor study habits ， influenced by non-intellectual factors ： Lack of good study habits. Primary and middle school students do not constitute a benign learning habits, the ability to study alone is poor. Primary and secondary school teachers teach the method of learning, but many students do not constitute scientific habits. Very few students take the initiative to prepare the lesson plan, and most students must propose to prepare the lesson plan to learn. A small number of students listen to the class carefully and actively, and can record the key points. Most students are in passive acceptance, their logical thinking is not active most students are in passive acceptance, their logical thinking is not active. In the preparation level, most students do not prepare for the exam, and do not develop the habit of preparation. To junior high school, the content of learning and difficulty coefficient increase, if the student does not have good learning habits, it can not keep up with the course and learning progress.

Lack of self-study ability, affected by intellectual factors： In primary school, students' self-study ability is widely weak, and most of the answering methods and mathematical concepts applied in the examination are all obtained through continuous training under the regulations of the teacher. Some areas that must be highly and deeply understood, concentrated in the teacher's tireless interpretation and a lot of training, do not require students too much through self-study. In middle school, due to the increase of subjects, the time of learning mathematics is limited, and the difficulty coefficient of mathematics content increases, it is difficult for students to learn mathematics through rich training as in primary school. With the continuous depth of China's examination reform and innovation, mathematics questions continue to innovate, a large number of independent innovation questions continue to emerge, so it is insufficient to only use the interpretation of teachers, students must also use their own self-study ability to deeply understand.

Poor adaptability is influenced by external factors ： In primary school link, students are basically all by parents, but into junior high school, especially those who just left parents waiting for students, is unfamiliar classmates and unfamiliar face, temperament, customs, they also want to know and choose their friends, teachers also from one or two people into many people, the transformation of the relationship between teachers and students, like also let some students feel uncomfortable and not integrated. The change of the relationship between teachers and students also makes some students feel uncomfortable and rely on psychologically, inevitably homesick. After integrating into this period of environment, many different subjects are implemented, and they feel that they can not keep up, resulting in poor grades.

IV. Countermeasures for connecting primary school and middle school mathematics teaching

4.1 The connection of teachers

Connection of teaching content: There is a close relationship between the mathematics textbooks of primary and secondary schools. Teachers look for the logic of professional knowledge composition in the teaching materials, care about the teaching content of different levels, and master all the professional knowledge management system of mathematics of primary and secondary schools, which has specific guiding significance for the docking and cultural education of mathematics of primary and secondary schools. Therefore, before the implementation of the mathematics curriculum, teachers must clearly explain the new curriculum norms, and strive to improve the docking of mathematics teaching. In fact, in the link of compulsory culture and education in China, the arrangement of teaching materials pays attention to the consistency and logic of professional knowledge points, and the content and difficulty coefficient are very consistent with the understanding level of students. Therefore, teachers must flexibly apply different teaching materials according to the characteristics of students' mental and physical development. At the same time, teachers should do their best to increase the infiltration of relevant professional knowledge, so that the definition, mode, regularity and mathematics concepts of primary and secondary school mathematics form a whole in students' brains, and drive them to create a detailed mathematics professional knowledge management system.

Connection of teachers' teaching methods: The learning of mathematics professional knowledge in junior high school must require a large number of abstract logical thinking, which is a whole process from cognition to rationality. The mathematics course is dedicated to practicing students' ability to observe and analyze, ability to deal with problems and summarize. These exercises of abilities imply that primary and secondary school students rise from actual brand image thinking to abstract thinking ability, but this kind of leap is very difficult for primary and secondary school students who just graduated from university, which makes junior middle school mathematics look very difficult. Therefore, primary and secondary school teachers should transfer appropriate mathematics and logical thinking mode in high classes, let students participate in abstract logical thinking, gradually improve students' understanding structure, and prepare for junior middle school learning.

Connection of teacher communication: The characteristics of compulsory cultural education are very significant: primary and secondary school teachers only manage preschool education, middle school teachers only manage middle school cultural education, do not communicate with each other, independent. Therefore, it is necessary to further improve the cultural education management system, so as to build a bridge of mathematics and cultural education in primary and secondary schools, and get rid of this situation. In terms of culture and education, we should attach great importance to the docking problems of primary and secondary schools, issue relevant policy documents, and support the activities organized by schools.

Connection of teacher management: Students are the main body of learning. Before teaching, in addition to analyzing the teaching content, we should also analyze the situation of students. Teachers should not only investigate the students' professional knowledge, grasp and application status, but also need to investigate the psychological elements of students. There are indirect effects between students' psychological factors and understanding factors, and these influence factors sometimes play a deterministic effect.

4.2 The connection of students

Connection of students' learning : In order to integrate into the cultural and educational environment of junior high school as soon as possible, students must develop good scientific learning habits before entering the school. "Cultivating good mathematics learning habits is the prerequisite standard for the successful connection to primary and secondary school mathematics. Ye Shengtao also once said: " What is cultural education?" As for" what is cultural education, in short, is to cultivate benign learning habits, "Ye Shengtao responded:" Cultural education is to cultivate benign learning habits. In primary school, students should cultivate good study habits, such as preview before class and class, listening carefully, taking notes, working habits, and pay attention to cultivate the habit of eclectic math learning. In fact, in order to integrate into the study of junior high school, just preview before class, class, take notes, work is insufficient, students must also cultivate the good habits of research, doubt, reflection, practice activities, in order to improve students' innovative thinking ability and positive initiative [10].

Connection of learning psychology: In the whole process of learning mathematics, if the success and failure of learning are attributed to the internal, stable and controllable elements, it is not easy to produce self-suspicion, and it is not easy to affect their confidence in learning mathematics. Therefore, in mathematics learning, students should learn to train moderately attributable to the entry method, constitute an appropriate, active attributable to the style, improve the confidence in mathematics learning and the ability to integrate into the learning environment [12].

V. Conclusion

The docking of mathematics culture and culture education in primary and secondary schools is a key problem that must be dealt with. Through the study, the factors that affect the first grade landslide are multifaceted, but the key is the teacher and student factors. Therefore, to do a good job in the connection of primary and secondary school mathematics and culture education, be sure to do a good job in teachers and students. To do a good job in these levels of work, teachers and students need to work together.

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