The Necessity of Studying and Teaching Students
How to Learn Math after Class

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Abstract. Nowadays, teachers are trying to explore the 40-minute classroom "teaching", focusing only on the students' 40-minute "learning". But how does the students' self-study outside the 40-minute period. How should students learn after class? How to improve the students’ self-study ability? These are the keys to learning benefits for students, but they are ignored.

From the current situation, this paper analyzes the characteristics of mathematics, the "teaching" and "learning" of mathematics, and the close connection between classroom learning and after-school learning.

First, from the status Quo Analysis

Areas of today's mathematics teaching in the teachers' teaching focus on research, there is much research about teachers how to teach, and missing after leaving the teacher after class to students how to learn it, apparently ignored the stand in the position of student subject the attention to students' individual learning methods, ignoring the students' self-study ability, students rely too much on the teacher.

As teachers, we are working hard to study teaching, students learn with the teacher in class, but after class, but will not learn, and then often appear: in the classroom is clearly understand, understand, but after class, once left the teacher, will not learn, so look for the teacher to rely on. Or a to the next semester, change the teacher, then feel not adapt to the new teacher new teaching method.

In order to improve students' academic performance, the school has to ask teachers to make up lessons for students in their spare time, so as to increase class hours to improve students' academic performance. The phenomenon that some teachers occupy the class hour of function branch to go up mathematics class is quite serious. Even though the teacher spent a lot of effort to make up lessons for the students, the poor students still did not improve, and some students' scores in the unified examination were still single digits. These poor students really gave the teachers a headache. Encounter the occurrence of this phenomenon, in the final analysis is that students do not have their own set of learning methods. As long as a student has his own learning method, he can easily adapt to the different teaching methods of different teachers.

Teachers should study classroom teaching and learning, but also how students learn after class, and how to learn by themselves, so as to maximize the teaching benefits of mathematics. Knowledge is more important than number, ability is more important than knowledge, the teaching of mathematics in today's era of constantly improving teachers' teaching, the study of students should be more pace.

Second, from the Analysis of the Characteristics of Mathematics

Mathematics has a high degree of abstraction and strict logic, is a formalized thinking material. The disciplinary characteristics of mathematics determine that the key to its learning is not how much to listen to, how much to see, but how much to think. 40 minutes for mathematics, pure class learning together with the teacher, the students' thinking and development need time and space is not enough, the students to truly become the master of learning activities, learning mathematics is
not a pure memory, imitation, and training, but the independent exploration, cooperation, exchange and practice innovation, and other forms of learning, students need to after-school independently engaged in the activities of mathematical thinking, etc.

It lies in the students' correct learning method of positive thinking, not only thinking in class, but also it is very important to stick to long-term good learning attitude and positive thinking habit of problems in daily life. We can observe that students who are good at math will have their own learning methods, and will not be affected by some minor problems in teaching.

Third, from the Mathematics "Teach" and "Learn", the Classroom Study and the After-Class Study Connection Analysis

If only for the gardener, you just need to give the flowers regular watering, fertilizing, weeding, so they will grow on your own, and as a teacher, and students' relationship is never as simple as a gardener and flower, our spirit is the soul of teacher, the children can't represent the growth of body and grow their spirit of the soul, for math, if the children don't have their own suitable learning methods, they have not independent thinking, even if they try again, the teacher taught better, learning efficiency is also hard to guarantee.

As a teacher, I believe that we will encounter such a situation, when you ask students: preview, what do you still do not understand? As soon as the question is asked, first of all, most students will be quiet, and then, when you ask it again, you'll hear a chorus of "no!" At this point, when you put some of the questions specifically, you will find that the scene is back to the quiet scene. What's going on here? The bottom line is that children do not learn, do not think, lack of self-learning ability. Such students feel good about themselves, but in fact their preview benefit is very small, their learning problems are many. On the contrary, you will find a few students have their own learning methods, will learn, they can know their understanding of the knowledge, can put forward a few quality questions, such students, often have their own problems, but their learning harvest is not worse than others.

This is one of the differences between learning and not learning, but also whether students can have their own learning methods to reflect the difference in learning efficiency.

Teach a person "fish", not as good as teach a person "fish", and this "fish" should not only stay in the classroom, more should be to include after class, even a lifetime "fishing", in fact is: self-study ability.

Teachers' teaching is rooted in students' learning, centered on students' learning, and students are the main body. Only by knowing clearly what students want to learn and how to learn, students can gain more and benefit greatly, which determines what teachers teach and how to teach. On the other hand, if the lack of research on students, students cannot understand the situation of learning, teachers will not be able to start teaching, poor benefits.

Teaching and learning, teachers how to teach what is very important, but what students learn, how to learn more important, reflected as a lifelong learning ability. Teacher's teaching to students' learning, and students learn the key is not knowledge, but to learn to learn, learn to think, the goal of clear decided the teachers how to teach, so as a teacher, should undertake to the student studies, more standing in the position of students to explore how to teach it, so the students learn to have more direct better efficiency. Even "learning" research has more direct benefits and is more important for students,

In addition, let's analyze the relationship between internal and external causes of things. What students learn and how they learn are internal factors that determine their learning efficiency, while teachers' teaching is external factors. With the continuous improvement of students' self-learning ability, their influence on students will become smaller and smaller, while teaching efficiency will be maximized. From the standpoint of students, students should understand the needs of the main body of students. What students need more is efficient learning methods suitable for them, as well as self-learning ability that benefits them for a lifetime, as well as the ability to think about problems. 40 minutes of class learning is important, more important is the ability to think independently after class, as well as self-study ability. Thus to promote students to learn the content of the deep understanding.
Therefore, teaching and learning is correct, but to study teachers’ teaching, it is necessary to study students’ learning, which is also a premise, students’ learning results also determine the effectiveness of teachers’ teaching. The famous mathematician Hua Luogeng once remarked: "All inventions are not created by others, but by their own thinking, doing, and continuous progress."

Fourth, Analysis of Students' ability of Sustainable Development

Whether a student knows how to study after class directly determines the level of his autonomous learning ability, which is more focused on the individual's ability to study after class, it is the main way of learning that an individual takes after leaving school. Without this ability, the individual's lifelong development will be greatly limited.

For a person's entire life, compared to the school classroom study time, in the classroom study as well as outside the school study time is much longer. Moreover, the value of a person's life often comes from the social practice he attends after he leaves the campus classroom study. Facing the challenge of the new century, adapting to the rapid development of science and technology, changing careers and accelerating the rate of knowledge updating, one person's knowledge only in school is far from enough, everyone must lifelong learning. Whether our students are competitive, whether they have great potential, whether they have the ability to master knowledge easily in the Information Age, fundamentally, it all depends on whether they have the ability of lifelong learning.

Life-long learning is generally not carried out in schools, there is no teacher accompanied by, all depends on a person's independent learning ability, that is, after-school learning ability. "The illiterate of the future will not be those who cannot read, but those who cannot learn how to learn," says United Nations Educational, Scientific and Cultural Organization, author of learning to live, it is the need of social development to cultivate students' autonomous learning ability after class.

Learning activities run through a person's life, learning to learn, learn to think, learn to seek knowledge, is the most important ability that contemporary people must have to adapt to social development. "Mathematics New Curriculum Standard" also clearly points out: "The mathematics self-study ability raise, is one of current primary school mathematics teaching reform goals Includes the self-study ability in the school, but also includes the self-study ability after leaving the school. Mr Ye Shengtao, the educator, said: "To teach is not to teach". In the primary school stage, the student's plasticity is strong, is raises each kind of study quality and the ability, the development intelligence good time, in this critical period, pays great attention to the student after class study ability instruction, it is necessary for students to change from "knowing how to learn" to "learning how to learn".

In a word, for the whole life, the ability of self-study after class is more important. If learning ability in the classroom is a foundation, then the real goal should be to guide the development of students' learning ability after class, that is, to teach is not to teach. Therefore, teachers should pay more attention to students' learning while paying more attention to "teaching", to students' learning in "class", and to research and instruct students how to learn after class.

Fifth, Conclusion

Therefore, we can be sure that it is necessary for students to have a set of appropriate learning methods after class, but as students in primary school, they need teachers to discuss and guide them on how to learn learning methods. Primary school students lack the ability of learning and research, if only rely on their individual or parents to explore learning methods, then the possibility is not large, so we need professional teachers to stand in their position, for children to study and explore how to "learn", children's learning methods need teachers to train and guide.

If students learn, then their initiative to learn after class enthusiasm will naturally be improved, learning methods to find the right, learning efficiency will be greatly improved with.

Success in teaching is measured not by how well a teacher "teaches" but by how well a student learns and thinks for himself. Therefore, in order to improve teaching efficiency, we should not only study teachers' teaching constantly, but also directly discuss students' "learning" and seek benefits
from students' "learning". So, should the teachers and students, teachers should start from the student, standing in the perspective of students, to explore a set of suitable effective learning methods, let them become the main body of learning, only in this way, teachers can also be really did their dominant role, not only the classroom teacher, but influences the stage of the children learn outside the classroom, and even affect the real teacher lifelong learning.

Moreover, children who can learn have strong innovation ability, which comes from long-term self-learning and independent thinking, instead of "learning" some knowledge in the classroom. Children will learn even leave the teacher, he also can study anytime anywhere in the side found his "teacher", and to learn from them to certain knowledge, full of interest in learning enthusiasm self-confidence, he will think teacher are not necessarily correct, often with questions to do their own independent thinking, tries to find the scientific truth, innovation ability will be greatly enhanced with this spirit.

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