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RESEARCH ON THE EFFECTIVE PATH OF USING INFORMATION TECHNOLOGY TO CREATE EFFICIENT MATHEMATICS CLASSROOM IN PRIMARY SCHOOL

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PENELITIAN JALUR EFEKTIF PENGGUNAAN TEKNOLOGI INFORMASI UNTUK MENCIPTAKAN KELAS MATEMATIKA EFISIEN DI SEKOLAH DASAR

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ABSTRACT

Abstract: *The construction of an efficient mathematics classroom in primary school requires us to use various technical means and advanced design concepts comprehensively. The most important thing is to fully tap and release the inner potential of students through the use of these comprehensive technical means so that students can master knowledge more accurately and efficiently and learn and apply it flexibly. In real life, think about some practical problems with mathematical thinking and mode to carry out creative solutions for a problem. Therefore, under the guidance of information technology, the effective path of efficient primary school mathematics classroom, let us firmly seize the opportunity to develop The Times in the age of information technology and let the student's learning effect further improve.*

Keywords: efficient math classroom, primary school, information technology

Abstrak: *Pengembangan kelas matematika sekolah dasar yang efisien mengharuskan guru untuk menggabungkan berbagai sarana teknis dan ide-ide desain yang canggih, dan yang paling penting, penggunaan teknologi canggih, di mana potensi batin siswa digali dan dilepaskan, mendorong siswa untuk lebih akurat dan efisien dalam pengetahuan, Berpikir secara matematis dan berpikir secara matematis untuk memecahkan masalah kreatif. Dengan demikian cara efektif ke kelas dengan efisiensi matematika di bawah bimbingan teknologi informasi memungkinkan kita untuk berpegang erat pada kesempatan-kesempatan yang dikembangkan di era teknologi informasi dan meningkatkan dampak pembelajaran siswa.*

Kata Kunci: ***efficient math classroom, primary school, information technology***

CITATION

Pereira, J., Chen, J., Hang, L., & Li, L. (2022). Research on the Effective Path of Using Information Technology to Create Efficient Mathematics Classroom in Primary School. *Primary: Jurnal Pendidikan Guru Sekolah Dasar, 11* (1), 1-8. DOI: http://dx.doi.org/10.33578/jpfkip.v11i1.8298.

INTRODUCTION

In the process of primary school mathematics teaching, teachers should pay attention to take effective measures to improve the effectiveness of teaching activities, and build a high-efficiency classroom teaching mode(Chao et al., 2018). In such an information technology era, information multimedia technology-assisted teaching has brought us more and more surprises(Ni et al., 2021). Therefore, we should consider from the perspective of information technology to build a high efficiency of the primary school mathematics classroom, to find an effective way of action, so that our teaching effect can be further improved(Gore et al., 2021).

Elementary school mathematics the subject has its unique knowledge structure

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(Oppermann & Lazarides, 2021), for students of different age groups, may also have different degree of difficulty, so the elementary school mathematics teacher must comprehensive mathematical discipline characteristic and the characteristics of students' cognitive development for the design of the teaching, but in which information technology can play a good role in promoting, let pupils can in front of the abstract mathematical knowledge I am more active and able to find the lovability of mathematics (Oppermann & Lazarides, 2021). With the rapid development of information technology, how should primary school mathematics teachers make effective use of information technology to make classroom teaching more efficient? The author thinks that we should correctly understand the relationship between teaching and tools. Information technology is only a kind of teaching aid, while teaching quality and teaching efficiency are the key and soul (Yu et al., 2019).

Therefore, in the subject teaching activities, the author believes that we can explore from the following aspects, and use information technology to build a high efficiency of primary school mathematics classroom teaching.

THE WHOLE PROCESS OF OPTIMIZING CLASSROOM TEACHING WITH THE HELP OF INFORMATION TECHNOLOGY

The teaching process is the composition of teaching activities designed and implemented by teachers in advance(Wilson et al., 2021). After reflection, we will find that there are always some problems in classroom teaching that make our teaching not smooth enough(Alvarez et al., 2021). For example, a certain link delays too much time, so the order or link of classroom teaching needs to be adjusted. So, in order to solve these problems, we can analyze and explore from the point of view of the knowledge system of mathematics teaching and how information technology plays a role(Rainey et al., 2020). First of all, we must deal with the relationship between preset and generation (Bakogianni & Potari, 2019).

To build an efficient mathematics classroom, we should not only carefully preset but also pay attention to generation(Jesson et al., 2018). Presupposition is the teacher based on the curriculum standards, teaching methods, teaching means, teaching circle section of the design of the outlook. The purpose is to make classroom teaching orderly and effective(Mena et al., 2017). While the generation of this part is in the process of classroom teaching naturally appeared and developed(Thomson et al., 2012), and this emergence and development and elaborate design in advance has a close connection(Hämäläinen et al., 2021). Our default is for the sake of accurate and efficient generation ahead of time, however, generate part may not be completely according to our default, so the teacher at the time of applying information technology to make courseware should consider this problem and some preventive measures in advance, leave the classroom teaching process good allowance, to facilitate adjustment and optimization(Gebeyehu et al., 2021). Some knowledge points, for example, students learn very quickly, but teachers reserved time is more, this requests us to switch according to the students to master the situation in a timely manner, and in the teaching, also can have a lot of interaction between teachers and students, the teacher might also find thought the students easily master content, through questions and other students answers but there was one. This requires the teacher to stop, figure out the questions, and let the students really understand the content(Hämäläinen et al., 2021). With the deepening of the teaching reform, the use of information and multimedia technology to carry out teaching activities can effectively consider the occurrence of these situations(Gebeyehu et al., 2021).

Therefore, in order to effectively deal with these situations, we prepare as many examples or exercises as possible, but they may not all be displayed in the classroom teaching, according to the feedback of the students in the class situation, flexible

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adjustment, so as to make the classroom teaching process more smoothly achieve our expected teaching objectives(Hämäläinen et al., 2021). Classroom teaching process is not fixed, although the knowledge is same, but student will change, the student's reaction will change, so the primary school mathematics teachers to use multimedia technology reasonably, if some problems, students in the class did not solve, can also provide students with some exercises can master the resources after class. These resources can be distributed online so that students can get immediate feedback on what they haven't grasped(Newman, 2000).

WITH THE HELP OF INFORMATION TECHNOLOGY PLATFORM, SHORTEN THE RELATIONSHIP BETWEEN TEACHERS AND STUDENTS

The teacher-student relationship is very important (Roorda et al., 2021), an important factor that affects the student's learning effect(Vadeboncoeur et al., 2020). In classroom teaching, teachers usually convey their care and attention to students through direct communication and interaction with students, so as to narrow the distance between them and help them solve some difficulties, so that students can also love the teaching of a teacher, like math courses(Pritchett & Beatty, 2020). Teachers really care about the growth and development of each student from the bottom of their hearts, their words and deeds will naturally pass out their sincerity(Newman, 2000), imperceptibly infected students, but also let them feel. Pupils have a strong sense of honor and their interest in learning depends to a large extent on the social effects obtained through learning (Ni et al., 2021). They often get good grades by teachers, parents, brothers and sisters, classmates and friends appreciate and have a sense of honor, to keep the honor and study harder. So, when students get decent grades or progress, primary school math teachers should be timely to give affirmation, so that students get more incentives in their hearts (R Umami1, I K Budayasa1 & 1Mathematics, 2018). In addition to face-to-face communication, the construction of a good teacher-student relationship can also be carried out by writing comments to express their praise and expectations for students in the form of words. Students will watch it repeatedly after receiving the teacher's pertinent comments, which indicates that the teacher's comments are very important to them.

Therefore, primary school mathematics teachers should try to give students more positive feedback and evaluation, stimulate their interest in learning, mobilize their learning enthusiasm and initiative (Jupri, 2017). In addition to these means, we need to develop other ways for students to focus more on learning, with the help and reminder of teachers. For example, elementary school math teachers can use the Internet to assign special learning tasks to students so that they can catch up with the normal pace of teaching. Primary school mathematics teachers should make full use of information network channels to choose appropriate resources for students(Hastuti, 2020).

This teaching method is very necessary for some students. If teachers only pay attention to the integrity of teaching and ignore the differences among students, some students may feel pressure and fear of difficulties(Fraser et al., 2014). Therefore, primary school math teachers should help students boost their confidence by teaching online micro videos or releasing some other exercise resources, so that they can make more efforts after class, so as to make continuous progress and make them feel happy for their progress (M Maulana, N Hanifah, A N Aeni, 2019).

Therefore, the efficiency of teaching is not only it is reflected in the learning efficiency of students, and it is also reflected in whether students can grasp the subject knowledge in a solid way and improve their grades steadily. Therefore, primary school mathematics teachers should be good at using convenient network resources and students timely communication and contact, improve the quality of mathematics teaching.

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USE INFORMATION TECHNOLOGY TO PROMOTE STUDENTS' EFFICIENT COOPERATIVE LEARNING

From the perspective of teaching goals, the elementary school mathematics teaching is not only a transfer of knowledge and the cultivation of skilled(Guo et al., 2019), but also have ideological and moral quality of the mold, so that the elementary school mathematics teacher in the teaching process cannot be too much emphasis on competition among students*, but to let them learn to cooperate, gradually cultivate the students' cooperation consciousness and cooperation spirit (Gentrup et al., 2020).

Group cooperation is a kind of efficient learning way to active classroom atmosphere and a new strategy to improve teaching efficiency(Veldman et al., 2020). Adjust the competition between students and adjust the thinking mode of students by the open form, semi-open form and concentrated form of group cooperation; in the form of group cooperation, intra-group cooperation and inter-group competition, the communication mode between teachers and students is changed, which also promotes the development of interpersonal relationship (Kirik & Markic, 2012). In the process of developing cooperative learning, in order to make cooperative learning more effective, primary school mathematics teachers should play the role of the media of information technology, and guide students to use advanced modern technology to develop cooperative learning (Erdem, 2009; P.Jerito, Shiwei Tan, Li Li, 2020).

Students' cooperative learning may be carried out in class, or may need to be extended after class, so it is very necessary to use some software tools of information multimedia to communicate and share the learning results (Chan, 2020). This kind of cooperative learning is more open and diversified, which makes students no longer confined to a fixed time and space, and maximizes the efficiency and quality of learning (Veenman et al., 2002). Therefore, the development of cooperative learning can show the characteristics of high efficiency with the help of information and multimedia technology (Erdem, 2009). Students also need to cultivate their own ability of independent learning in study, but at the same time, they will encounter some problems. In order to solve problems well, students need to look up materials to meet their own needs. Primary school math teachers should teach students how to use the Internet to search the resources of math learning (Gentrup et al., 2020; J Pereira, T T Wijaya, 2021).

In this way, they are fully prepared when cooperating, so the efficiency of group cooperative learning has been greatly improved. The students' learning process is more efficient, which actually reflects that the students' learning ability has been further improved. Quality-oriented education requires us to cultivate students' comprehensive qualities so that they can become active learners who can learn.

THE CONTENT OF THE SUBJECT BECOMES MORE INTUITIVE WITH THE HELP OF INFORMATION TECHNOLOGY TEACHING

For those who have learned primary school math, math knowledge is very simple in the long run, but for primary school students some knowledge points are still difficult to understand (Tan et al., 2020). This also shows that mathematics has the characteristics of logic and abstraction. Then, elementary school math teachers can take advantage of the characteristics of information technology to present knowledge in an intuitive way and make it visible to students in a highly organized way. So most of the time, we think that students can't learn because of the students' intelligence, but we also need to think about whether there is a problem with the teaching method of teachers (Jiang et al., 2021)

The application of information technology makes our teaching process more flexible (Pereira et al., 2020). We should use innovative thinking to interpret these knowledge and provide students with more

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ways and methods to understand and construct knowledge (Vale et al., 2018). Multimedia teaching in many years of development from the perspective of education and teaching needs to improve their own functions, so primary school mathematics teachers should study its functions, and reasonably applied to our teaching activities, give full play to its advantages and values.

The skill of making multimedia courseware has always been regarded as an important aspect to show teachers' information technology literacy (Gong, 2021; J Pereira, T T Wijaya, 2021), but many teachers think it is not important. In fact, it is the combination of wisdom and art to make multimedia courseware vivid and attractive, and to accurately transfer knowledge (Purvis et al., 2020). So this is something that many of our elementary school math teachers need to work on. In a word, under the background of highly developed information technology, as primary school mathematics teachers, we should constantly learn to improve the level of information teaching, build efficient classrooms from the perspective of the application of information multimedia technology, innovate effective teaching models, and pay attention to the learning needs and feelings of students (Curtis et al., 2020). To enable students to synthesize multiple sources of information to understand and construct knowledge, so that their active learning will be rewarded, their inner sense of accomplishment will give them more motivation, and they will become effective learners (Lorenzo & Lorenzo, 2013).

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