



The Benefits of Innovating Approach Used in the Classes in Order to Teach Students from Early Stages

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ABSTRACT

Mathematics has more and more applications in life, basic mathematical knowledge and skills have helped people to solve real-life problems systematically and accurately, contributing to promoting society. development association. Mathematics in high schools contributes to the formation and development of the main qualities, general competence and mathematical competence of students; develop key knowledge and skills and create opportunities for students to experience and apply mathematics in practice; make connections between mathematical ideas, between mathematics and practice, between mathematics and other subjects and educational activities, especially with science, natural sciences, physics, chemistry Science, Biology, Technology, informatics to implement STEM education. Math content is usually logical, abstract and general. Therefore, in order to understand and learn math, the math program in high schools needs to ensure a balance between learning knowledge and applying knowledge to solve specific problems. In the process of learning and applying mathematics, students always have the opportunity to use technological means, modern teaching equipment, especially electronic computers and handheld computers to support the performance process, discover knowledge and solve math problems.

Keywords: Mathematics, applications, schools

1. Introduction

Active teaching method is a method of teaching mathematics in which the teacher uses a group of educational and teaching methods in the direction of promoting the activeness and creativity of learners and at the same time combating the habit of learning. passivity of learners. This is a method of teaching mathematics in which the teacher makes the students acquire knowledge and skills of mathematics based on the children's direct observation of specific phenomena and things in the classroom. life around children. When using the visual method, it is important to note that visual aids must be beautiful, colorful, and brilliant. Visual aids must be rich and varied [1].

All children instinctively have a tendency to explore the world around them from an early age. Therefore, early access to science not only helps children to have the right orientation in awareness of the world around them, but also nurtures their passion for discovery for their journey of adulthood. Research has shown that by the time children reach the age of seven, most children develop both positive and negative attitudes towards science [2].

Harnessing the natural inclinations of children at this age by exposing them to positive approaches to science will therefore have long-term benefits for students in the future. future. They will maintain this inquisitive, creative learning attitude in their studies and lives. According to research, Science is a subject that not only helps children develop skills in daily life such as communication skills, the ability to observe, cooperate, analyze and solve problems, but also form and develop good character for children such as perseverance, carefulness, creativity and meticulousness, etc.

These skills are accumulated through continuous learning and experience from the time a child starts preschool through high school, college, and for life. These are also essential skills to help them be more successful in a dynamic and competitive working environment in the future [3].

2. The importance of applying the approach in teaching mathematics

Mathematics is an important subject that students must study at all levels, so it should receive the attention of the public, especially teachers. According to the draft, Math is built in the direction of streamlining, close to reality, increasing applicability, reducing dexterity, puzzles, etc.

compared to the current program [2]. The content of the Math program reflects the core values, the foundation of the math culture, which must be mentioned in high schools, must reflect the need to understand the world, arouse interest and interests. of learners.

In addition, the content of the Math program also focuses on practical application, linking with real life and other subjects, especially with subjects in the field of STEM education (math, science, etc.), associated with modern development trends of economy, science, social life and urgent global issues (such as climate change, sustainable development, financial education, etc).

The program ensures completeness, unity and continuous development from grade 1 to grade 12 in Vietnam. Conceivably, the program is designed according to the model of two closely linked parallel branches, one model branch. describes the development of core knowledge content circuits and a branch describes the development of students' competencies and qualities [4].

In addition, the Math program continues with the preschool curriculum, as well as creating the foundation for vocational education and higher education. The Math curriculum is integrated around three knowledge circuits including Numbers and Algebra; Geometry and Measurement; Statistics and Probability.

Mathematics is also divided into two phases. The basic education stage helps students grasp the most essential mathematical concepts, principles, and rules as a basis for learning at the next level or can be used in everyday life. The career-oriented education stage helps students have a relatively general view of Mathematics, understand the role and application of Mathematics in real life, and the professions related to mathematics so that students have a career-oriented basis, have the minimum capacity to self-explore problems related to mathematics throughout life [5].

3. The role of the learner

Besides the core educational content, in each school year, students with natural science and technology orientation are selected to study a number of topics. These topics aim to enhance knowledge of Mathematics, skills to apply knowledge in practice, to meet students' interests, needs and career orientations [4].

Teachers need to master the student-centered spirit, promote the students' positivity, self-discipline and initiative, pay attention to the needs, cognitive abilities, and different learning styles of each individual learner. born. Teachers also need to flexibly apply active teaching methods and techniques.

Depending on the objectives, content, objects and specific conditions, there are appropriate forms of teaching organization such as individual study, group study; learn in class, learn outside of class, avoid stereotypes and machines. Combining teaching activities in the classroom with hands-on experiences, applying mathematical knowledge into practice [6].

Teachers need to help students develop beliefs about the position and positive role of Mathematics in life in modern society, encourage students to develop interest, willingness to self-study, to explore. Discover to succeed in Math [3].

4. The teacher's role in teaching

We need to associate math with practice, apply it in life, and implement interdisciplinary between math and science subjects. Students after graduating from high school when faced with life's problems will know how to build a problem model for that reality [7].

With the new curriculum, the approach in the process of building Mathematics aims to develop students' competencies and qualities and bring Math closer to reality. With such an approach, it is necessary to cut out some cumbersome and complicated knowledge. The knowledge that has little to do with reality in high school is also removed. This approach to Mathematics is not new in the world and many countries have done it successfully, but when implemented in Vietnam, it is necessary to take into account a number of factors, including human factors, especially teachers [1].

In the new program, textbooks are no longer required documents but become reference materials. Teachers are free to use a variety of reference sources when teaching. Teachers are free to decide on tools and implementation methods to bring Math closer to reality, helping students easily grasp the knowledge.

5. Benefits of combining the teaching methods

Traditional teaching methods such as presentation, conversation, practice is always important. Innovation does not mean eliminating these methods, but starting with improvements to improve efficiency and limit their disadvantages. Teachers first need to master the requirements and proficiently use techniques in preparing and conducting lessons, how to promote students' creativity and positivity [3].

There is no one-size-fits-all teaching method that fits all goals and content. Each teaching method and form has its own advantages,

disadvantages and limitations. Therefore, the coordination of diverse methods and forms in the entire teaching process is an important direction to promote positivity and improve teaching quality. Whole-class teaching, group teaching, and individual teaching need to be flexibly combined [2].

Problem-solving teaching is a teaching perspective aimed at developing thinking capacity, the ability to recognize and solve problems. Learning is placed in a problematic situation containing cognitive contradictions [7]. Through problem solving, students acquire knowledge, skills, and cognitive methods. Problem-solving teaching is a basic way to promote students' positive cognitive abilities, which can be applied in many forms of teaching with the level of self-reliance of students.

In which the teaching is organized according to a complex theme associated with real life and professional situations. The learning process is organized in an environment that enables students to construct knowledge individually and in social interaction. Complex teaching topics are often related to many subjects or areas of knowledge, associated with practice [4].

It is a teaching concept that aims to make mental and physical activities closely combined. Students perform learning tasks and complete action products, with a flexible combination of intellectual and physical activity. This is an active and holistic approach to teaching. Applying action-oriented teaching has important implications for the implementation of educational principles that combine theory with practice, thinking and action, school and society [8].

Media plays an important role in innovating teaching methods, in order to enhance visualization, experimentation and practice. Currently, the equipping of new teaching facilities for high schools has been gradually enhanced. However, teachers' self-made teaching means are always important and should be promoted [5].

Teaching technique is the way teachers and students act in small situations to implement and control the teaching process. Techniques are the smallest unit of the teaching method. There are general teaching techniques and specific techniques for each method [9].

The method has a dialectical relationship with the teaching content. Besides the general method that can be used for many subjects, the use of specific teaching methods plays an important role in teaching the subject [2].

Self-help learning method plays an important role in actively promoting and promoting students' creativity. There are common cognitive methods such as collecting, processing, evaluating information, organizing work, working in groups. In many forms, it is necessary to train students in general learning methods and subject learning methods [6].

6. Conclusion

In general, there are many directions to innovate teaching methods with their own approaches. The innovation of teaching methods requires appropriate conditions in terms of means, facilities and teaching organization, and conditions on organization and management. In addition, teaching methods are subjective. Each teacher with their own experience needs to determine the direction to improve teaching methods. However, the textbook is not the most important factor. The most important issue of this educational innovation is the human factor. In order to meet the new program, teachers must definitely change a lot in both knowledge and teaching methods. Therefore, the Ministry of Education and Training needs to have a very careful and meticulous training schedule for teachers.

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