CULTIVATING CREATIVE THINKING SKILLS IN TEACHING SCIENCE

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Creativity is an important aspect of the person advancement. The concept of globalization, combined with technological advancements, necessitates energy products that are beneficial and innovative for people from all walks of life. The academic institution is the most important place to nurture students' dynamic talents and abilities, as well as an important medium in the development of students' creative minds. The science curriculum designed to be incorporated into educational institutions is viewed as a subject that can help students improve their creative thinking skills.

In today's challenging world of learning in the global economic climate, innovation and creativity are more important. Creativity is no longer something distinct or original. It has now become an essential and fundamental component of a person's organization or country's success. Creativity is not limited to inventions or discoveries but encompasses all actions and ideas. Creativity and critical thinking should coexist to propel it to a productive and committed future.

Individuals with creative thinking skills have the capability to use their minds to invent new ideas, new possibilities, and new discoveries that are unique in their creation. It can take the form of genuine or abstract ideas. This is shown in the following examples: Coming up with new ideas, making analogies and metaphors, Creativity is a process that can be honed and improved. Every person has the ability to create. Therefore, that potential should be enhanced by providing individuals with opportunities and opportunities to participate in practices that foster creativity. Curriculum in today's more competitive world, in line with developments in society's modernization, necessitates a

higher level of education and creative thinking. Many scientists can be instructed in accordance with the nation's advancement in the path of science and technology through science learning. Science is regarded as an important subject in the development of cognitive skills. Science instruction based on the scientific method process in creative thinking has increased students' creative thinking levels, improved their academic success levels, and advanced their attitudes toward science knowledge lessons.

The discovery, understanding, presentation, application, and transformation of scientific knowledge are the five types of creative learning practices in science. To encourage creativity through discovery activities, teachers can assign learners to conduct independent research or engage students in abstract reasoning training in science process skills. Students are involved in developing science in a unique and diverse range of scientific inference, classification, scientific research questions, hypothesis formation, trial and methods of measurement, using tools or equipment, and drawing conclusions from empirical data. According to Piaget (1976), "to understand is to create." To encourage learners to seek new alternative examples, analogies, characterizations, and explanations of a scientific theory or principle in the subject, teachers can motivate them to seek such concepts. Furthermore, teachers can encourage students to construct existing concepts by exposing them to opposing ideas, engaging them in debate, and having faith in the opponent's evidence (Driver, 1994).

According to Cheng (2011), scientific knowledge can also be used to generate creativity in various forms of expression. Knowledge, concepts, and principles, for example, can be presented through role playing, drama, music, pictures, poems, and stories. To foster creative knowledge, students were put in situations where they had to come up with new ways to explain scientific phenomena, make predictions, solve problems, and state or imply that which was unknown.

Furthermore, as part of the transformation of scientific knowledge, students are given the opportunity to suggest changes based on their knowledge. As an alternative to

developing methods and new ways to integrate them with creativity in science learning, students are encouraged to ask questions and critique any practice of science and knowledge in the textbook. A student-centered approach to teaching will increase entertainment, involvement in the learning environment, self-concept, and student talents (Toh, 2003). According to Cropley (1997), the goal of student-centered teaching is to assess and enhance the behaviors of both teachers and students, such as diligence, perseverance, curiosity, love of challenges, willingness to take high risks, and determination. As a result, in order to transform the curriculum to develop creativity, teachers should take advantage of the opportunity to exercise creative teaching practices in the classroom. Creative teaching practice is an important component in achieving educational institutions' goals for the development of creative students.

Understanding that fear destroys creativity, teachers must be more conscious in this regard by generating a more friendly environment for our students to be more creative and capable of carrying out more interesting and effective teaching and learning. According to Maria and Kamisah (2010), students who were engaged in a variety of activities that can enhance creativity and were given the freedom to discover in their learning process demonstrated an increase in creativity. Among other suggestions for encouraging creative thinking in science.

Creativity is a sophisticated cognitive activity that is vital to human survival. To be able to think creatively, one must first understand the basic methods of creative thought and then apply them to produce interesting results. It is a discipline that must be mastered through education and life experience. One's personal and creative personality can be strengthened if they already have it. Innovative teaching strategies can assist students in coming up with new ideas and delving deeper into topics. Furthermore, by using the proper techniques for developing creative ideas, students can develop their existing talent while always thinking about how to best develop their talents and abilities. Creative thinking is essential in generating new knowledge that is comprehensive and

covers all aspects of development. Thus, nurturing creativity is significant in learning acquisition to ensure quality and progressive community.

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