DISCOVERY LEARNING AND CONCEPTUAL UNDERSTANDING

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Does it matter that the student's conclusion was predetermined by the teacher if she uses data analysis to understand a topic that is new to her? Is the pupil not still learning this material for themselves? Is it not true that the topic is still fresh to the student even though the teacher was aware of it or knew the answer the students would give through leading questions, exercises, and data?

Regardless of the teacher's response to this set of questions, the student's past knowledge and past experiences must be the foundation of any technique the teacher develops, such as discovery learning. Discovery Learning, an approach to inquiry-based instruction, was developed by Jerome Bruner. This well-known theory advises students to build on their prior experiences and knowledge, apply their intuition, imagination, and creativity, and look for new information to uncover facts, connections, and novel truths. Learning requires an active search for solutions rather than passively taking in what has been said or read.

In addition to that, discovery learning refers to any learning when students independently or through group discussion arrive at a logical solution, idea, principle, or problem by considering relevant facts, experiences, and examples. Therefore, discovery learning is opposed to methods that predominantly emphasize direct instruction, in which the teacher imparts knowledge to the pupils while they largely receive it passively.

On the other hand, it is equally important to promote and encourage discovery learning in acquiring conceptual knowledge. One of the key markers for success in learning science is conceptual knowledge or grasping the concept of science. Understanding concepts with misconceptions and mastering concepts in science learning that are in line with the consensus of scientists, do not depart, and do not lead to other hypotheses that can lead to cognitive conflict are related. It is vital that students grasp the appropriate concept in relevance to their background knowledge.

In other words, discovery learning promotes cognition to encourage students to reflect on their prior experiences and connect them to the present lesson. To prevent errors in conceptual comprehension, teachers must be critical and carefully support exploration learning.

References:

Rajagukguk, K. (2021). The Development of Discovery Learning Model to Reduce Science Misconceptions in Elementary School Students. The SEALL JOURNAL. Vol, 2, No. 1

Bohney, B. (2016). Discovering" writing with struggling students: using discovery learning pedagogy to improve writing skills in reluctant and remedial learners. Published Master's Thesis. Indiana University