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ENHANCING ACHIEVEMENT IN SCIENCE THROUGH INTRINSIC MOTIVATION AND CONCEPT MAPPING: AN ACTION RESEARCH STUDY FOR GRADE SIX STUDENTS

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Over the last few decades, researchers of different disciplines have been trying to identify the potential factors that contribute to students' reluctance to enter the field of science. It is known that intrinsic motivation is a crucial psychological factor to enhance students' achievements. This action research aimed to use intrinsic motivation and concept mapping to enhance students' achievement in science. Twelve Grade 6 students from a 1AB school in the Dehiowita Education Zone were selected. The student group was selected based on the term test marks of the science subject (marks obtained were below 30 for both 1st and 2nd term tests). Concept mapping was used as the main strategy of the intervention, and intrinsic motivation was used as the key psychological factor. As homework assignments, 30 concept maps were developed by each student in the study group, and revisions were made at the school. During the intervention, positive reinforcements and constructive feedback were given while evaluating the students. A good rapport was built with students through effective communication. The question-and-answer strategy was applied to enhance intrinsic motivation. After the intervention, it was observed that students improved their achievement and obtained above 30 marks for the third term test. This study showed the effectiveness of concept- maps in boosting student achievements. A significant difference (t = 7.546, p = 0.001) between pre and post-interventions in their intrinsic motivation was observed. The findings confirmed that intrinsic motivation and concept mapping are powerful factors to enhance students' achievement in science.

Keywords: Concept mapping, Intrinsic motivation, Science performance