

THE EFFECT OF SELF-REGULATED LEARNING METHOD ON CONCEPTUAL ACHIEVEMENT IN THE TEACHING OF HEAT AND TEMPERATURE

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Abstract

This study investigates the effect of teaching based on self-regulated learning on students' conceptual achievement on the subject of "heat affects matters" included in the "change and recognition of matters" unit of primary education fifth grade science course. Pretest-posttest control group experimental design was used in the study. Two 5th grade classes randomly chosen from a primary school located in the Eastern Black Sea Region of Turkey were included in the study. One of them was appointed as experimental group, and the other one was appointed as control group. The "heat affects matters" subject was taught to the control group by use of the activities in the textbook for three weeks (10 course hours). On the other hand, self-regulated activities were employed in teaching the subject to the experimental group. The research data were collected via the Conceptual Achievement Test and the Interview on Events and Situations. It was seen that more improvement occurred in the conceptual achievement of the students learning through self-regulated activities in comparison to the students learning through the activities in the textbook, and their skills of associating concepts with daily life and transferring knowledge developed more. Since the instructional model used in the study proved to have positive effects on conceptual development, it is suggested to use models of this sort in teaching the subjects on which students have many misconceptions.

Key Words: Science teaching, self-regulated learning, conceptual achievement, heat and temperature.