

The influence of learning in the outdoor setting on knowledge and attitudes of elementary school students

Hila Lernau

Advisor: Nir Orion

The study is conducted in 8 elementary schools in Pardes-Hana – Karkur during 2004-2008. During the past 4 years, the elementary schools in the town are learning science by an experimental program called “Thinking Science – Understanding the Environment”. The program integrates lessons in class (with relevant booklets, lab experiments directed in a Hands-on approach) and outdoor learning activities (single lessons in the school-yard and half day-trips around the town).

In 2004 the program was taught to the students of the 2nd and 3rd grades, and during the following years it extended progressively to the higher grades.

The program is supported by guidance of all science teachers in town.

In 2007 a concepts questionnaire was developed asking students from 5th grade (that studied the program for three years) and students from 6th grade (that did not study the program at all and served as a control group) to recall concepts and experiences from the last three years. The questionnaires consisted of open-ended and closed questions. The concepts used were assigned to 4 categories: concepts learned in an outdoor learning activity, concepts learned in an inquiry approach in class, concepts learned by both approaches and concepts learned in class in a verbal manner only.

In 2008 an attitude questionnaire was developed asking students from 3rd, 4th, 5th and 6th grades to define and characterize an outdoor learning activity based on their experience. The questionnaire consisted of open-ended and closed questions. Both questionnaires are analyzed in qualitative and quantitative manners.

First results indicate that the experiences made in an outdoor learning activity are recalled in the student’s long-term memory and are accessible and mediate to them.

Another interesting result shows that students from relative low socio-economic background achieve better outcomes in two domains: Questions that are attached to content that was studied in the outdoor learning environment, and Questions that are attached to content that was studied in the outdoor learning environment and in an inquiry approach in class. The outdoor learning activity presents a stimulus for acquiring knowledge to those students, that are not used to formal ‘learning’ and does not get proper support and encouragement with their learning habits.