

THE EFFECT OF A NATURE EDUCATION PROJECT ON STUDENTS' ASTRONOMY ACHIEVEMENT AND ATTITUDES

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Abstract

Astronomy concepts require special methods in transfer of knowledge since they are difficult to understand, they require utmost use of imagination and thinking three dimensionally and they are related with the quality of the skill of understanding. The purpose of this study is to measure the effects of a science instruction project realized as part of The Scientific and Technological Research Council of Turkey (STRCT) 4004 Nature Education and Science Schools Support Program on students' achievement in astronomy and their attitudes towards astronomy. Within the scope of the project, a total of 40 8th graders living in rural areas of Samsun, which are difficult to access and which have low economic levels, were taken in a science camp for 9 days. This study was designed as one group pre – post test experimental research. "Astronomy achievement test" which included 32 multiple choice questions to find out the change in students' achievement about basic astronomy subjects, was implemented as pre- and post-test. In order to find out the effect of the instructions in the project on students' attitudes towards astronomy, "attitudes towards astronomy scale", which included 27 items of 5 likert type, was implemented as pre- and post-test. The statistical analysis of the data was conducted with SPSS 23.0 package program. Astronomy achievement test and attitude towards astronomy scale were found to have normal and homogenous distribution since their pre- and post-test results were $p > ,05$. Dependent samples t test, which was conducted to find out the significance of the increase, showed that the change was statistically significant ($t = -2,060, p < 0,05$). Dependent samples t test showed that the change in attitude scores was statistically significant ($t = -5,642, p < 0,05$). These results show that nature education project has a positive effect in increasing students' astronomy achievement and the astronomy activities in the project help students to develop positive attitudes towards astronomy.

Keyword: Astronomy success, Astronomy attitude, Nature education.