

THE EFFECT OF PROBLEM-BASED LEARNING ON STUDENTS' SCIENCE ACHIEVEMENT, SCIENTIFIC PROCESS SKILLS AND SCIENTIFIC ATTITUDES

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Abstract: The aim of this study is determine the effect of probem-based learning on students' science achievement, scientific process skills and scientific attitudes about the science unit "light". The research sample consisted of a total of 82 seventh grade middle school students, as 42 control group and 40 experimental group. Participants were studying at a state middle school in the Çorlu-Tekirdağ district located in the Northwestern part of Turkey. The pre and post-tests, a scientific process skills tests, an achievement test and scientific attitudes scale were applied to both the control and experimental group to compare the effectiveness of problem-based learning over textbook based teaching methods. Problem-based learning activities continued a total of five weeks as the four hours each week. The research results revealed that experimental group students compared to the control group showed some increase in their science achievement. In particular, problem-based learning appears to enhance students scientific process skills.

Key words: Problem-based learning, science achievement, science process skills.

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