

## The Effects of Discovery Learning on Students' Success and Inquiry Learning Skills

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### Suggested Citation:

Balım, A., G. (2009). The Effects of Discovery Learning on Students' Success and Inquiry Learning Skills. *Eğitim Araştırmaları-Eurasian Journal of Educational Research*, 35, 1-20.

### Abstract

*Problem Statement:* In this study, the unit "If It Weren't for The Pressure?" in the Science and Technology course at the Elementary 7th grade was tackled in two different ways. The first way is the discovery learning method along with the daily plans and activities. The second is the traditional teaching method. This study particularly aims at answering the question: "How does teaching science through the discovery learning approach affect students' academic achievement, perception of inquiry learning skills, and retention of knowledge?"

*Purpose of Study:* This study aims at identifying the effects of the discovery learning method upon the students' perceptions of inquiry learning skills, academic achievements, and retention of knowledge. This research also investigates whether there is a significant difference between the experimental and control groups in learning the subjects of the unit "If It Weren't for The Pressure?" from the point of cognitive and affective learning levels.

*Findings and Results:* A quasi-experimental research design with a pre-test and post-test control group was used in this study. Fifty-seven seventh graders participated in this study during the spring term of the 2006-2007 academic year.

The result of the study shows that there is a significant difference in favour of the experimental group over the control group regarding the average of academic achievement, scores of retention of learning, and perception of inquiry learning skills scores, both on cognitive and affective levels.

*Conclusions and Recommendations:* The conclusions of the study showed that there is a significant difference in favor of the experimental group over the control group in terms of academic achievement scores, perception of inquiry learning scores, and retention of learning scores in both cognitive and affective levels. Thus, it can be stated that the experimental group

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students, who scored high in the post-achievement test, have high perception of inquiry learning skills scores. Using the discovery learning method, which is one of the various teaching methods in which the students are active and are guided by the teacher, is considered to increase students' success and inquiry learning skills more than the traditional teaching methods.

**Keywords:** Discovery learning method, perception of inquiry learning skills, science education, curriculum.