

## **An Evaluation of a Constructivist Online Science Learning Activity: a Case Study in Turkey**

### **Abstract**

This exploratory case study provides a quantitative report on the integration of a specific online information system into the science curriculum using authentic tasks in a class setting. It aims to investigate the effects of a Web-based learning tool in a science course on students' achievement and attitudes toward science learning. The subjects are 21 seventh grade students. The Science Achievement Test (SAT) and attitude scales for science learning were applied as pre-tests and post-tests. Students' total time of using the course web site was kept by Web log-system. The quantitative findings of the study indicated that there were significant differences between the pre-tests and post-tests. In addition, there was a positive relationship between the site usage time with achievement and attitude of the students towards science learning. The study contributes to an understanding of online learning and provides a basis for empirical study of learners performing real educational tasks.

**Key words:** *web-based learning, instructional technology, interactivity in web-based instruction, attitude toward science learning.*

### **1. Introduction**

Personal computers are being used increasingly in distance education, and they have the potential to change the nature of education radically. Computers can be powerful study tools as students use them whether for learning at a distance or for using self-instructional material (Federico, 2000). The National Association for