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# THE EFFECT OF ORDER OF DIFFERENT TEACHING ACTIVITIES RELATED TO MECHANICAL WAVES ON CONCEPTUAL CHANGE

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**Abstract**

The aim of this study was to examine the effect of order of applying different socio-constructivist based teaching activities that were related to mechanical waves on grade 10 students' conceptual change. Sample of the study consisted of 55 students who were enrolled in an Anatolian high school at the city centre of Balıkesir. A pre-test post test control group design was adopted in this study. Teaching activities were implemented in different orders for teaching the unit of waves in two experimental classes. Experimental group 1 students were taught with constant order activities whereas experimental group 2 students were taught with varied order activities throughout teaching sequences. Control group students were instructed on the basis of methods and strategies that were offered in the curriculum and were used by teacher of the class. A conceptual understanding test was administered to reveal students' ideas about mechanical waves before and after teaching. Additionally, semi-structured interviews were conducted with five students from each group to investigate students' ideas in detail. Students' responses that were given to conceptual understanding test and interviews were analyzed phenomenographically. Analysis results show that change in the learning of students in the control group was found to be small compared to the students in both experimental groups after instruction. Furthermore, development of experimental group 2 students' learning was higher than students of experimental group 1.

**Keywords:** Waves, physics education, conceptual change.