



## UNDERSTANDING THE EFFECTS OF THE SCIENCE MUSEUM OF PHYSICS SUBJECTS OF VOCATIONAL HIGH SCHOOLS STUDENTS

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### Abstract

Physics lessons are known to be difficult for vocational high school learners because it requires abstract concepts and mathematical procedures. In this study, we investigate the effect of informal learning environment to understand magnetism and sound waves subjects on eleventh grade students. Two classes of eleventh grade students consisting of 12 and 13 individuals were selected. On the Expansion step of 4E learning models, the students visited the İzmir Karşıyaka Bahçeşehir College of Science Museum to comprehend the knowledge through daily lives. At the end of the practice, students' learning levels were evaluated by 20 multiple-choice achievement tests involving the magnetism and sound waves subjects and their attitudes to physics lessons. The behavior of the students in informal learning environments was observed during the field-trip. When academic achievement test results compared with the scores obtained from previous achievement tests, achievement test results increased and there was a significant increase in attitudes towards physics lessons. Direct observation showed that the students' learning requests were positive.

**Key Words:** 4E learning model, informal learning, vocational high school learners.