

RELATIONSHIP BETWEEN MOTIVATION AND PHYSICS PERCEPTIONS OF EIGHTH GRADE STUDENTS

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The aim of the study we are presenting, was to determine the motivation of students towards science and to examine its relationship with their perceptions of physics. In the context of science education, it is important to determine the motivation of students regarding the lessons, considering the positive effect of motivation on learning and achievement. In the research, causal-comparison research design, one of the quantitative research methods, was used. The accessible population were all eighth graders studying in middle schools in the center of Kütahya. The sample consists of 630 eighth grade students from seven different schools. Convenient sampling method was used to select the sample. Data were collected using two different scales in the study. The first one is the Conceptions of Physics Questionnaire (CoPQ) (Sharma, Stewart, Wilson & Gökalp, 2013) and the second is the Science Motivation Questionnaire (SMQ) (Glynn & Koballa, 2006). First of all, the adaptation of the CoPQ scale to Turkish was carried out. The translation and adaptation of the CoPQ tool into Turkish was done by the researchers. There are a total of 15 items consisting of two different dimensions in the CoPQ: fragmented and cohesive. There are seven items in the Fragmented and eight items in the Cohesive scale. The Science Motivation Questionnaire aimed to measure their motivation. This scale includes 30 five-point Likert items. This scale consists of six sub-dimensions: intrinsic motivation to learn science, extrinsic motivation to learn science, interest in learning science, determination to learn science, self-efficacy about learning science, and anxiety about science exams. The maximum value that can be obtained from the CoPQ is 75 and the minimum value is 15. With the Science Motivation Questionnaire (SMQ), the highest score that can be obtained is 150 and the lowest score is 30. As a result of confirmatory and explanatory factor analyses, the validity of the measurement tools was proven. The results showed that there is a moderate significant correlation ($r=0.49$) between students' science motivation and their cohesive physics perceptions. Moreover, there is a low significant correlation ($r=0.14$) between students' science motivation and their fragmented physics perceptions. The direction of these interactions can be examined by applying different control mechanisms with various experimental research.

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