

Development of Science Motivation Scale

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Abstract - Motivation is the most important factor which affects the academic success of the students. Students who have higher motivation engage more to the class activities. One of the reasons for having negative perspective and low academic success of student in science is that students have low motivation for science lessons. The purpose of the study is developing a scale to show motivation of middle school students towards science lessons. Data used in research gained from two independent study groups. The first study group (N=498) is used to determine the structure of factor of the study. The second study group (N=275) is used to test consistence of model and data. Total number of students in the study group is 773. The expression of the motivation of middle school students is shown with 52 items consisting of 2 sub-dimensions which are internal motivation and external motivation. 12 of these items are negative substances for the motivational elements of the science lessons. According to data obtained from the scales, explanatory and confirmatory factor analyzes were carried out during the process of testing the structural validity of the scale. As a result of exploratory and confirmatory factor analysis, model which consists of 21 items and 1 factor is appropriate for both theoretically and statistically. Reliability of the scale is examined by Cronbach Alpha coefficient calculated based on the internal consistency of the items and testing again. The Cronbach Alpha internal consistency reliability coefficient of the scale is 0.79. Considering the results of reliability, it can be said that the scale has sufficient level of reliability. It can be thought that the scale can show the motivation of the students.

Keywords: Science motivation, science education, secondary school, motivation scale, Development of Scale