



THE TURKISH ADAPTATION OF THE CONCEPTIONS OF LEARNING SCIENCE QUESTIONNAIRE: THE STUDY OF VALIDITY AND RELIABILITY

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Abstract

The purpose of the present study is to translate the "Conceptions of Learning Science Questionnaire (COLS)" into Turkish language and also adapt and validate it. First, three English teachers translated the original questionnaire from English to Turkish. Later three other experts, blind to the original questionnaire performed a back translation from Turkish to English. Moreover, another expert conducted Turkish grammar check and made the necessary corrections. Later the questionnaire translated was prepared for validity and reliability analyses. 415 students from Anatolian High Schools participated in the study. Construct validity was tested by exploratory factor analysis and confirmatory factor analysis. The reliability coefficient was calculated for each factor in the scale. For the analysis, SPSS 15 and Lisrel 8.72 software were used. When the analysis results were examined, it was seen that the Turkish version of the questionnaire had a 7-factor structure, which are memorizing, preparing for exams, calculating and practicing, increasing one's knowledge, applying, understanding and seeing in a new way, like the original version. These factors together explain the 58.0% of the variance. In the Turkish version of the questionnaire, internal consistency for the questionnaire in general was calculated as 0.82 and Cronbach's alpha reliability coefficient for each factor varied between 0.65 and 0.82. As a result, it can be said that the Turkish-COLS is a reliable and valid scale that can be used to identify and categorize the framing conceptions of students in Turkish culture while they are learning science in general.

Key Words: Conceptions of Learning Science Questionnaire, Path Model.