

## **A Determination of Turkish Student's Achievement Using Hierarchical Linear Models in Trends in International Mathematics-Science Study (TIMSS) 2011**

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**ABSTRACT** The purpose of this study is to determine the relationship between features of schools and students' mathematics success in the TIMSS (Trends in International Mathematics-Science Study) which was administered to 8<sup>th</sup> grade students in 2011. As a correlational survey study, the population of the study, the characteristic sample for TIMSS applications, and this sample are all designated by using a two-stage stratified clustering model. The relationships between mathematics success and variables at student and school-levels have been tested with a two-level hierarchical-linear model. According to the findings of the study, there is a difference between students' mathematics scores at different schools. The most explanatory variable defining the variance at the school level is economic affluence of homes within school boundaries; at the student level, the students who have educational resources at home are better off.