A comparison of school climate with TIMSS 2015 science achievement among South-east and East Asian countries

ABSTRACT

Since 1995, the International Association for the Evaluation of Educational Achievement (IEA) implemented the Trends in International Mathematics and Science Study (TIMSS) as an international comparative study. This article aims at identifying the correlations of science classroom instructions with TIMSS science achievement of eighth graders among countries in Southeast Asia and East Asia. The freely downloadable secondary data were analyzed using a plug-in for SPSS, i.e., the International Database (IDB) Analyzer (version 4.0) of IEA using an imputation methodology involving plausible values so that student's performance can be reported. This study found that Southeast and East Asian countries with high average science achievement adequately emphasized academic success, have teachers with job satisfactions well as facing few challenges, have students with sense of belonging to school. Based on the research findings, policy recommendations were made to the Malaysian Ministry of Education to boost Malaysian eighth graders' science performance in the forthcoming TIMSS studies.