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Project Title: **Linguistic Complexity and Differential Item Functioning for English Learners in Math Tests.**

Through differential item functioning (DIF) methodologies, this study measures item-level differences in the MCAS fourth-grade math test between students who are proficient in English and students who are English learners (ELs), primarily Latino. While comparing DIF detection methods, the study examines whether the linguistic complexity of word math problems is a source of construct-irrelevant variance in the differences between these groups of students. Preliminary findings indicate that the items linguistic complexity is an important variable affecting the difficulty of the MCAS math items differently for ELs and non-ELs, suggesting that the reported scores for ELs might underestimate their math proficiency, thus providing an inaccurate picture of the achievement gap between linguistic groups in mathematics.

We will only know we are successful in reducing the achievement gap between culturally diverse groups of students when we have accurate and valid measures of differences in proficiency. This research seeks to have an impact on current practices for testing ELs by informing test construction and analysis, and improving the validity of inferences about mathematics proficiency drawn from test scores.