

Scaling Interleaved Practice: Preliminary Evidence and Lessons Learned from a Systematic Replication

Anna Bartel

WestEd, San Francisco, California, United States

Abby Lavine

WestEd, San Francisco, California, United States

Drew Barrett

WestEd, San Francisco, California, United States

Katie D'Silva

WestEd, San Francisco, California, United States

Jodi Davenport

WestEd, Alameda, California, United States

Bryan Matlen

WestEd, San Francisco, California, United States

Abstract

We report on an in-progress replication study to test the efficacy of interleaving in U.S. middle-schools. Interleaving combines two learning strategies, discrimination learning and spaced practice, by mixing different problems within an assignment and spacing similar problems across assignments. While the benefits of interleaving are well-documented in controlled experiments, only recently have there been attempts to widely scale this principle to education contexts. The study design is a randomized controlled trial with a sample of 13 classes, 239 students, and 6 schools. Preliminary results show effects in the predicted direction, students who received interleaved practice performed higher than those who received blocked practice ($g=.11$), but the difference is not significant. While our sample lacks the statistical power to detect effects, we are in the process of collecting data from two additional cohorts. This study contributes to how learning research can be translated to advance learning in authentic contexts.