

EDUCATION

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## EFP Takeaways

Effects of Flipped Classroom Instruction: Evidence from a Randomized Trial

### Background

Advocates of the flipped classroom model, where college students view a video lecture at home and work on exercises with the instructor during class time, claim the practice not only improves student achievement, but also helps to close the achievement gap. Yet, there is little research that explores the effects of flipped classrooms on student learning. Using a randomized controlled trial at West Point, Elizabeth Setren, Kyle Greenberg, Oliver Moore, and Michael Yankovich aim to close this gap in the literature by examining the effects of the flipped classroom model on student achievement in Math and Economics. Their work is published in vol. 16 issue 3 of *EFP*.

### The Study

The authors conduct a randomized controlled trial at West Point during the 2016 Fall semester. They estimate the effects of the flipped classroom model on student achievement in two required courses: Introduction to Calculus and Principles of Economics. 1,328 students participated in the study.

#### For more details:

- View the [full issue](#).
- See the [full article in \*Education Finance and Policy\*](#).
- [Sign up here to receive future \*EFP Takeaways\*](#).
- Summary of:  
Setren, E., Greenberg, K., Moore, O., & Yankovich, M. (2021). Effects of Flipped Classroom Instruction: Evidence from a Randomized Trial. *Education Finance and Policy*, 16 (3): 363-387.

### Findings

In the study, the flipped classroom produced short term gains in Math and no effect in Economics. Moreover, the flipped model widened the achievement gap: short-term effects in Math are driven by white, male, and higher achieving students. The authors observe lower levels of student engagement and instructor interest in the less effective flipped classrooms. Moreover, the average short-term gains in Math fade by the course final even though the achievement gaps persist.

The findings demonstrate that it is feasible for the flipped classroom to induce large gains in student learning in a short period of time, but that the effects vary by subject, student characteristics, and teacher motivation. The exacerbation of the achievement gap, the fade-out of effects, and the different effects by subject suggest that educators should exercise caution when considering the flipped classroom.

Figure 3: Racial and Baseline Academic Ability Achievement Gaps

