



## Forming Student Groups and the Effect on Academic Performance

### What is this Research About?

Team formation and development is a fundamental part of post-secondary education. Students regularly work in teams to complete labs, work on assignments, or for presentations. The researchers were interested in two different methods of team formation: self-selected teams and instructor created teams matched on previous academic performance. The effects of formation technique on student attitudes and academic performance were then examined.

### What did the Researchers Do?

The researchers conducted this study on a cohort of first year students in the engineering program at the U.S. Air Force Academy. Different sections of the class used different group formation methods to place students in groups. In approximately half of the class section, students self-selected their groups. In the other half of the class sections, students were placed in groups using the matched-performance team formation technique. Students worked in groups throughout the semester, completing 10 group assignments worth 40% of their final grade. To evaluate the effect of formation technique, the researchers administered a questionnaire measuring students' attitudes about their groups. Students completed the questionnaire twice, once during the middle of the semester and once at the end. The researchers also evaluated the academic performance of students and their teams.

### What did the Researchers Find?

Teams matched on previous academic performance had, on average, higher final grades. This effect was caused by a higher average in the team components of the course. The effect size, however, was only a difference of one percentage point (83.9% to 85%). Students were more likely to have an already established friendship in self-selected groups, but students from both groups were just as likely to make new friendships. Overall, student attitudes about the team showed no significant differences between self-selected and matched performance groups, indicating that by the end of the semester, students did not prefer one type of team over the other.

# SoTL

## Snapshot

A synopsis of a scholarship of teaching and learning journal article

### ➔ How to Implement this Research in Your Classroom

The researchers of this study recommend the use of matched-performance groups because of the higher academic outcomes. They do, however, caution that the circumstances at the US Air Force Academy are likely different from a traditional university classroom. Additionally, only two team formation techniques were studied. Instructors should carefully think about the different factors influencing team formation instead of choosing a method at random. In courses where students will be working together on multiple projects over a semester, matched-performance groups may work well.

### ➔ Citation

Post, M. L., Barrett, A., Williams, M., & Scharff, L. (2020). Impact of team formation method on student performance, attitudes, and behaviors. *Journal of the Scholarship of Teaching and Learning*, 20(1), 1–21. <https://eric.ed.gov/?id=EJ1254305>

### ➔ Keywords

team formation  
teams

group dynamics

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TEACHING AND LEARNING