

Review of: "The Positive Impact of Dropping the Lowest Test Score on Academic Performance and Stress Levels in MathBased Graduate Courses"

Jakob Schwerter¹

¹ Technische Universität Dortmund

Potential competing interests: No potential competing interests to declare.

The study examines a method to increase student exam performance among college students and improve academic outcomes. The study focuses on math-heavy classes, where anxiety tends to be high. The study proposes the method of letting students write several (midterm) exams while not all count towards the final grade (i.e., dropping the lowest test score).

Though the reason for this study is that students face high test anxiety, unfortunately, there are no results on whether the implementation influenced students' test anxiety.

Additionally, no information on the sample is given, which would be necessary to show that the cohorts are comparable, as this study is a cross-cohort comparison and not an RCT. Do the authors have additional information like HS GPA or other information to compare the cohorts? Could one use this migration background, gender, and other demographic variables for a more robust estimation?

The descriptive of the data analysis is more than short. The reader would benefit from more information. The authors show only descriptive results and no regression analysis. Are these differences statistically significantly different from each other? Confidence intervals would be interesting to see. When calculating the standard errors, it would be necessary to include the cluster structure of the data.

In addition, it is unclear whether the results are driven because students feel less anxiety or because students "just" self-tested more often and are hence better in the exam. See for example:

Schwerter, J., Dimpfl, T., Bleher, J., & Murayama, K. (2022). Benefits of additional online practice opportunities in higher education. *Internet and Higher Education*, 53, 100834. <https://doi.org/https://doi.org/10.1016/j.iheduc.2021.100834>

Schwerter, J., & Brahm, T. (2022). Voluntary e-learning exercises support students in mastering statistics. *Working Paper*, 1–21. <https://doi.org/10.31235/osf.io/8p2xh>

Another two conditions, which allow for two midterms, one exam and two midterms two exams without allowing to drop the lowest test score from the final grade, would be needed to say whether the results are driven by the dropping of the lowest test score and not by increased self-testing. In addition, it would be necessary to also gather information on

students' anxiety levels throughout the semester to measure if there is a different starting level and development between the conditions.

Given the study settings, the low number of students, missing information on the students and the missing comparison with students taking the same number of tests without being allowed to drop the lowest test results from the final grade, I think the study's implications are limited.