

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

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Potential competing interests: No potential competing interests to declare.

The paper examines how altering the exam settings impacts students' grade in higher education. The main finding is that introducing two exams instead of one with students having the opportunity to drop the lowest score, grades can be improved and, potentially, students will study more.

The paper is interesting and can have merit, however, there are several shortcomings that need to be corrected.

1. The study compares a very low number of students, less than 30 in each group that might pose questions regarding the external validity of the findings. Increasing the sample size can substantially increase the validity of the findings.
2. The statistical significance of the differences across the groups was not calculated. This should be done. With low sample sizes, it can be that some of the differences are not statistically significant.
3. The authors compare only average grades across the groups, but did not use any control variables to control for the differences across the groups. The better performance of the students in one group might be because of having better performing students in that group. With very low sample sizes, this bias can be severe. I suggest including control variables about prior academic achievement and demographics into the study and applying a regression framework. A regression results will automatically show the statistical significance of the differences (see my point above).
4. The outcome variable is the grade achieved by the students in the given class. As a robustness check, it would be useful to use other dependent variables, too, e.g., the grade of the students in follow-up courses. This can shed light on whether the treatment (two exams) are leading to grade inflation only, or students will gain better knowledge of the subject.
5. Claims about international students are unsubstantiated. Classes with several international students should be included in the analysis to be able to make valid conclusions about international students. Preferably, an international student dummy variable should be introduced.
6. The proposed setting (duplicating the exams) generates additional workload on instructors. It would be important to do a kind of cost-benefit analysis. That is rather difficult if not impossible, but it can be interesting to investigate other options, too, that are less demanding for the instructors. E.g., solving a sample exam on the class before the exam; this requires less additional work from the instructors, but can provide similarly favorable effects for students.
7. Finally, the study can be complemented with a survey to investigate how anxious students are in the different settings, and whether the the proposed setting (two exams, lowest score can be dropped) is leading to lower level of anxiety.

