

Investigating the Mathematical Performance of Undergraduate Students in the Flipped Learning Method Grouped by the DISC Personality Test Along with the Lecturer's Scaffolding

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1. Round 1

1.1. Reviewer 1

Reviewer:

In the introduction, "The investigation of human needs has long been a focal point in the fields of psychology and sociology," you might strengthen the contextual relevance by explicitly connecting this investigation to educational performance, setting a clearer bridge to the study's purpose.

In "A virtual group for each class was created on the iGap Iranian application," provide more specifics on how the features of the iGap app were utilized, beyond basic communication, to facilitate learning.

The list of topics for the pretest and posttest could be more detailed. Consider briefly describing how these topics align with General Mathematics I to justify their selection.

The sentence, "Group formation was based on the DISC Personality Test results, with each group ideally comprising one student from each personality category," would benefit from an explanation of how group dynamics were monitored or adjusted if issues arose.

The description, "The Kolmogorov-Smirnov Test was used to assess the normality of the data distribution," could be strengthened by justifying why this specific test was chosen over alternatives.

The discussion mentions that "The Flipped Learning method benefits both genders equally," but it could be enriched by suggesting theories that explain why gender did not influence the outcomes.

Authors uploaded the revised manuscript.

1.2. Reviewer 2

Reviewer:

The explanation of Maslow's and Alderfer's theories is informative but somewhat lengthy. Condensing this to focus on how these theories underpin the study's educational approach could enhance readability.

In the paragraph starting with "The educational system, which receives a substantial portion of the government's annual budget," clarify why the emphasis on government investment is crucial to understanding the motivation behind this educational study.

The explanation, "The reliability of these assessments was validated through consistent grading rubrics," could be expanded with details on how inter-rater reliability was ensured and whether there were any training sessions for graders.

The paragraph on instructional materials notes that "Students were provided with PDF materials and 30-minute instructional videos." Clarify whether the materials were accessible to students with disabilities or if any accommodations were made.

In "Cohen's d was calculated to measure the effect size," consider providing a brief rationale for interpreting these effect sizes, especially for readers unfamiliar with this metric.

The sentence, "Extroverted students showed significantly greater academic progress compared to introverted students," should address potential confounding factors, such as varying levels of prior academic performance.

In describing non-significant results for companionship, "There is no difference in the companionship of introverts and extroverts," discuss the implications of a small sample size on the power of these tests.

Authors uploaded the revised manuscript.

2. Revised

Editor's decision after revisions: Accepted.

Editor in Chief's decision: Accepted.