

Growth Mindset in Bangladeshi Secondary Schools (2017-2018)

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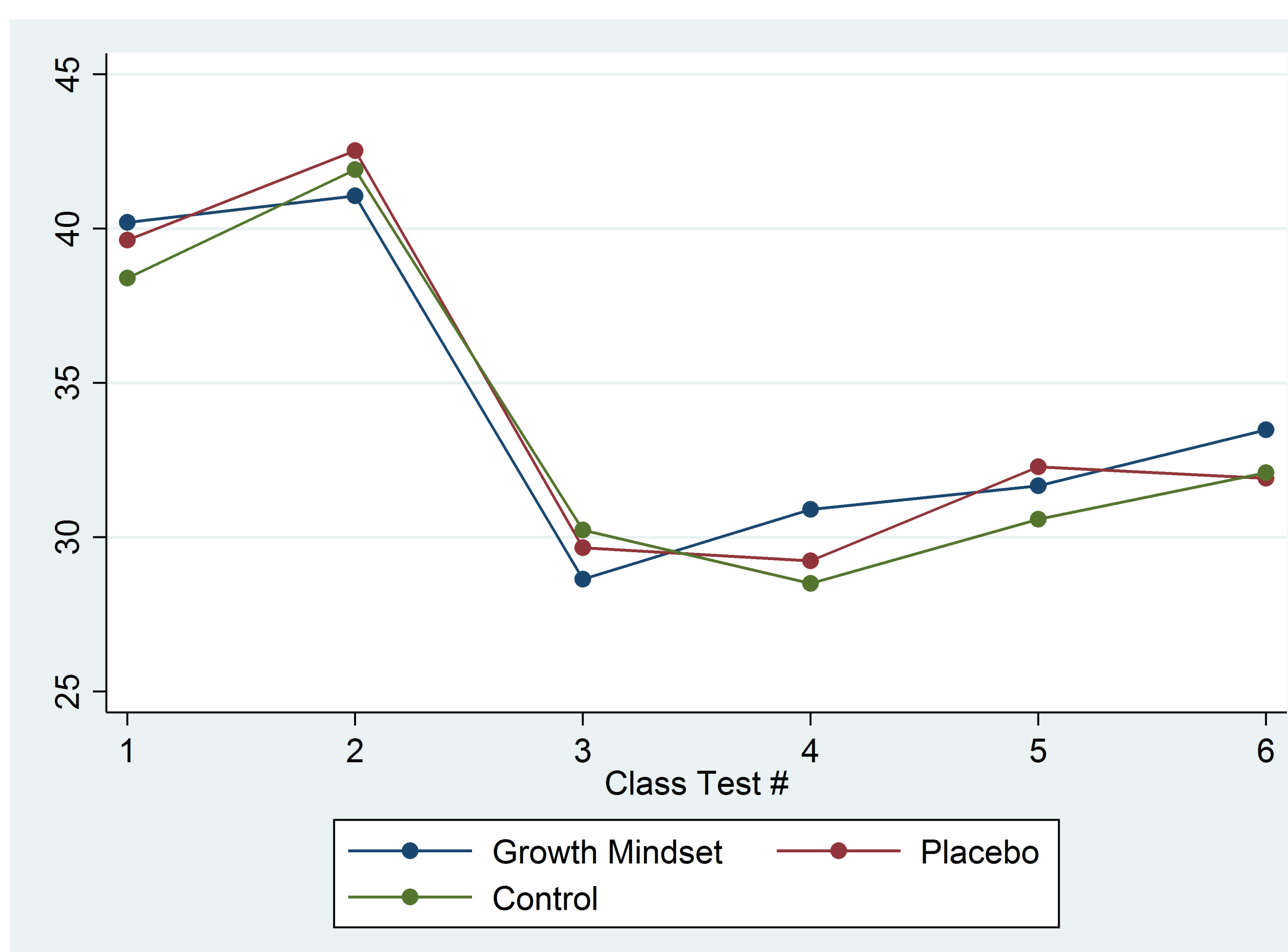
Introduction

Our project aims to test the effectiveness of the Growth Mindset methodology. The proponents of GM believe that by changing the underlying beliefs students have about intelligence, they realize they can get smarter by putting more effort into learning. This additional effort and commitment should lead to higher achievement.

If this hypothesis holds true, Growth Mindset could be used in relatively inexpensive educational policies. GM might also be more effective on minority groups, such as females, migrants and racially marginalized groups. Young individuals from these groups frequently lack self-confidence and underestimate their potential, and thus are less often benefited by other types of educational policies.

Lastly, proponents of Growth Mindset frequently suppose that teaching students about the malleability of the brain's structure is the main reason behind GM's success in previous field experiments. Nevertheless, this statement does not seem to have been empirically tested before. Therefore, our study proposes to disentangle whether the shift in the students' understanding of intelligence plays a bigger role in the final effect than the change in the perceived value of effort. In an attempt to better understand the student's mindset shift, we propose an experiment that allows us to observe performance differences between students who received an intervention with and without a neuroplasticity section.

Preliminary Results



Our preliminary analysis suggests that the growth mindset intervention groups had slightly higher increases in quiz scores than our control group. Further regressions are being conducted to verify the extent of the effect.

Data and Methods

To check the validity of this hypothesis, we designed a RCT (Randomized Controlled Trial) in three schools in the suburbs of Dhaka, Bangladesh. RCTs are particularly useful because they provide insight on the real causality relations behind the studied variables. Students from Grade 6 to 8 were (randomly) divided into three different groups: Control, Treatment with Neuroscience, and Treatment. The interventions were composed by four 1-hour sessions conducted by local instructors that were specially trained by our team. These sessions presented Growth Mindset material that was developed by MindsetWorks® and translated by a bilingual psychology professor at University of Dhaka. The Control group of students received one hour of free time instead of the GM session.

Each student was asked to answer questions on their social economic status, beliefs about education (before and after intervention) and to indicate their friends and study buddies in the school. This last piece of information will be relevant to the design of the students' networks map inside the school, which will allow us to notice any difference in the effectiveness of the intervention across different groups of students.

The scores of six math quizzes were used to evaluate the achievement of the students in the trial. The quizzes were designed to have the same difficulty level. In addition, we collected data on the students' presence in classroom and on teacher's individual reports.

Conclusions & Next Steps

Our preliminary analysis suggests that the growth mindset intervention group had a slightly higher increase in quiz scores than our control group. Although the increase is small, it is practically significant – the amount is higher than one that generally results from financial incentives. Our finding may prove to be useful when considering the financial cost of helping students perform better given a limited budget, as implementing growth mindset intervention costs significantly less and may influence many more students than do giving out financial incentives.

As next steps, we would like to see if there are differences in treatment results between different sub-groups. For example, does either gender observe stronger effects? In addition, we would like investigate the effect of intervention on areas other than quiz scores, such as administrative grades and reported effort. Lastly, we would like to take a look at spillover effects due to natural interaction between students and teachers outside of intervention times.

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