



ALPINE  
INSIGHTS



# Effects of preference-based teaching methods on long-term retention

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By Michael Bigler, Dakota Cuellar, Ilyana El Mendili, William Elkiess, Tania Loureiro and Liam Phan

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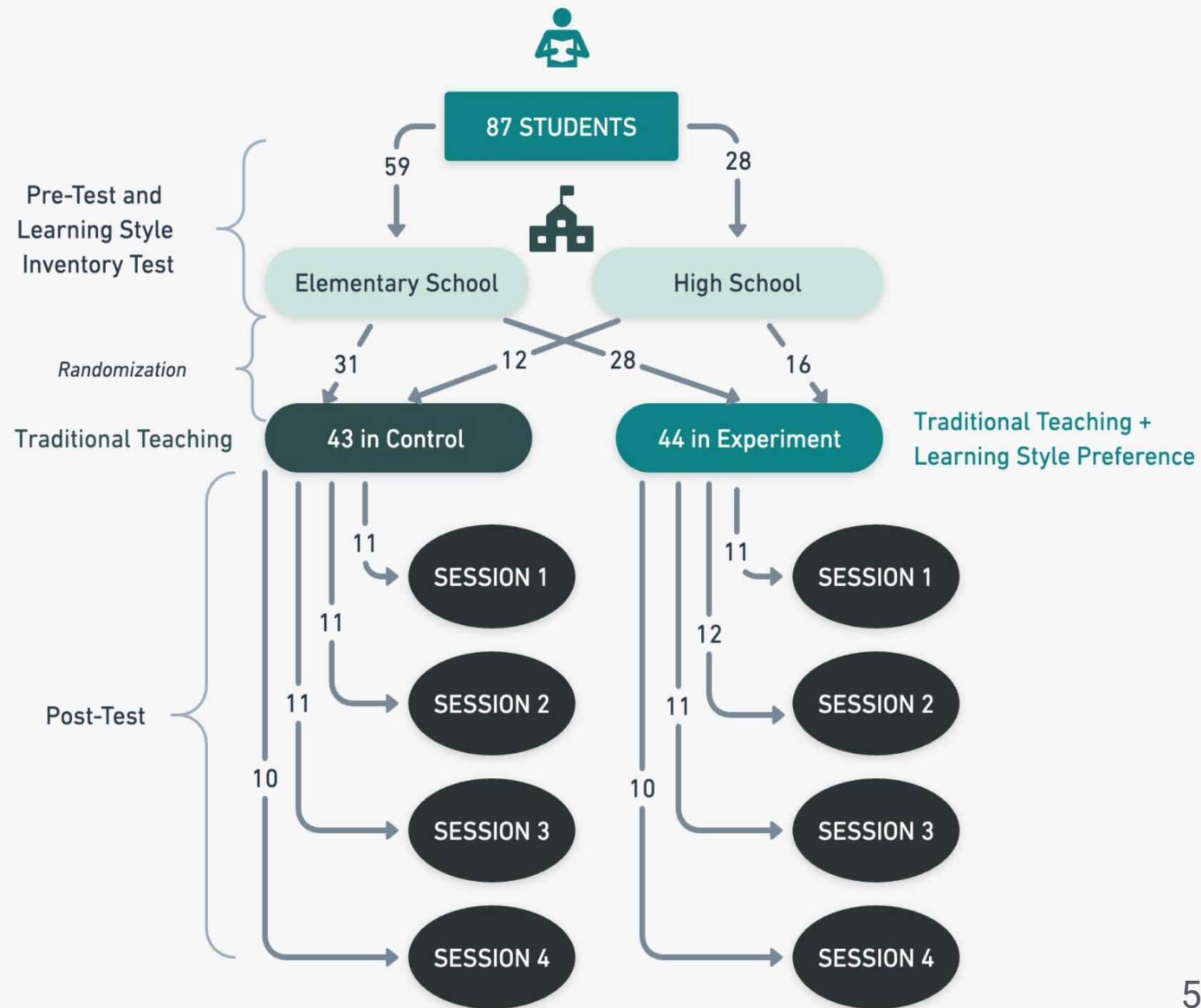
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# INTRODUCTION



# The Setup





Does incorporating a student's learning style preference into teaching methods improve the retention of content ?

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ANALYSIS





# Difference in differences method







## DIFFERENCE IN DIFFERENCES METHOD

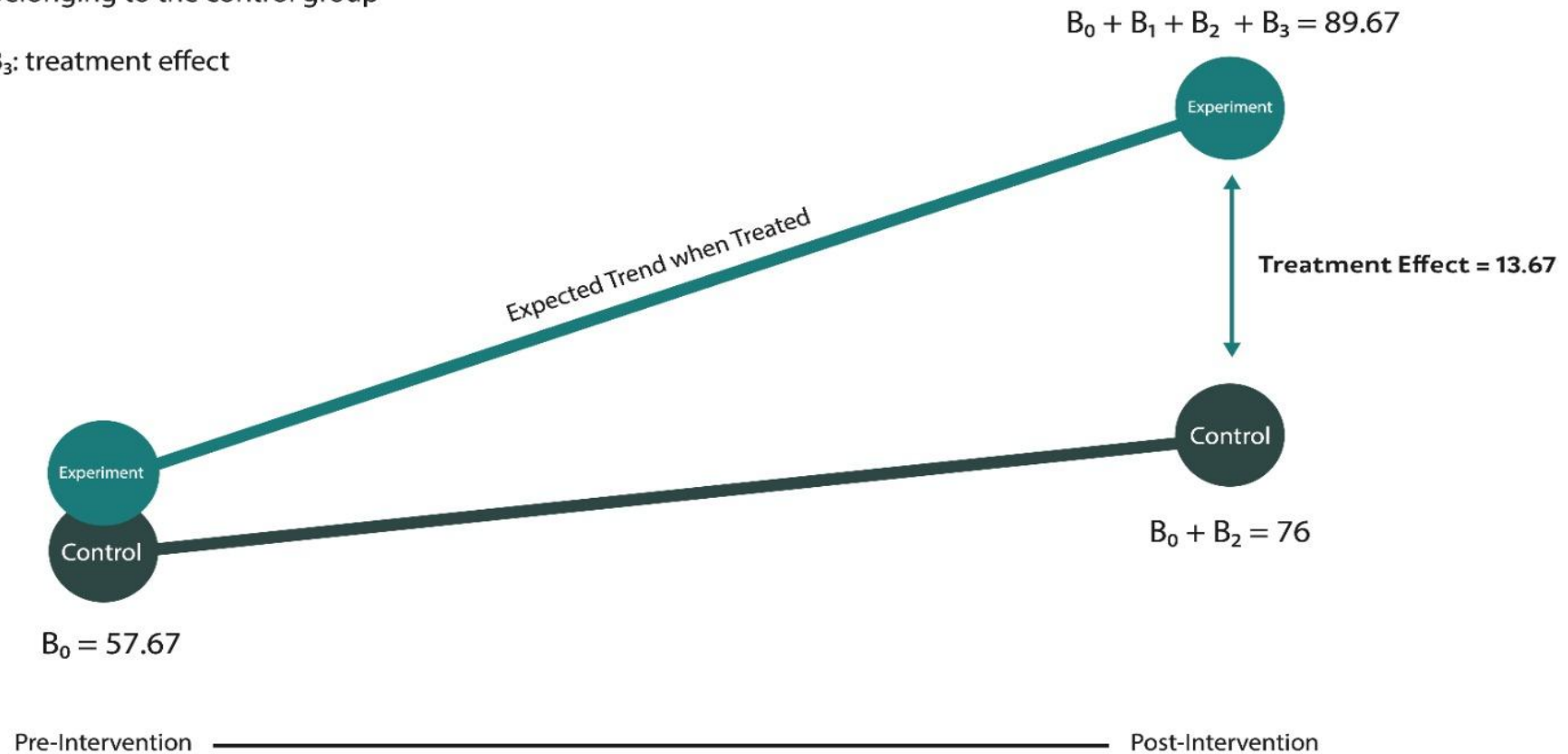
$B_0$ : average score of the control group before the treatment

$B_1$ : difference of the pre-test scores between the control group and the experiment group

$B_2$ : difference between pre-test scores and post-test scores for students belonging to the control group

$B_3$ : treatment effect

OUTCOME (Score)

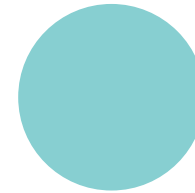




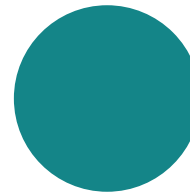
# RESULTS



No differences in score  
between the pre-test of the  
two groups



Increase in score between the two  
tests for both groups



Significant effect of  
the treatment



# Take away

**+ 13.68**

Increase in score for those who participated in the experiment  
compared to other students

➔ **You should continue implementing this method, it works !**



# EXTENSIONS



# Separating “good” from “bad” students

	Low pre-score students (score from 0 to 55)	High pre-score students (score from 55 to 100)
Average difference in scores between experiment and control group	<b>+17.52</b>	<b>+7.18</b>



## Take away



**The impact of specialised courses had a bigger effect on students who scored between 0 and 55 on the pre-test.**



# Separating high school from elementary school students

	High school students	Elementary school students
Average difference in scores between experiment and control group	<b>+18.02</b>	<b>+10.85</b>



## Take away



**The impact of specialised courses based on preferences had a bigger effect for high school students.**






# CONCLUSION



# Comments & Recommendations



1. Decrease in score between pre-test and post-test



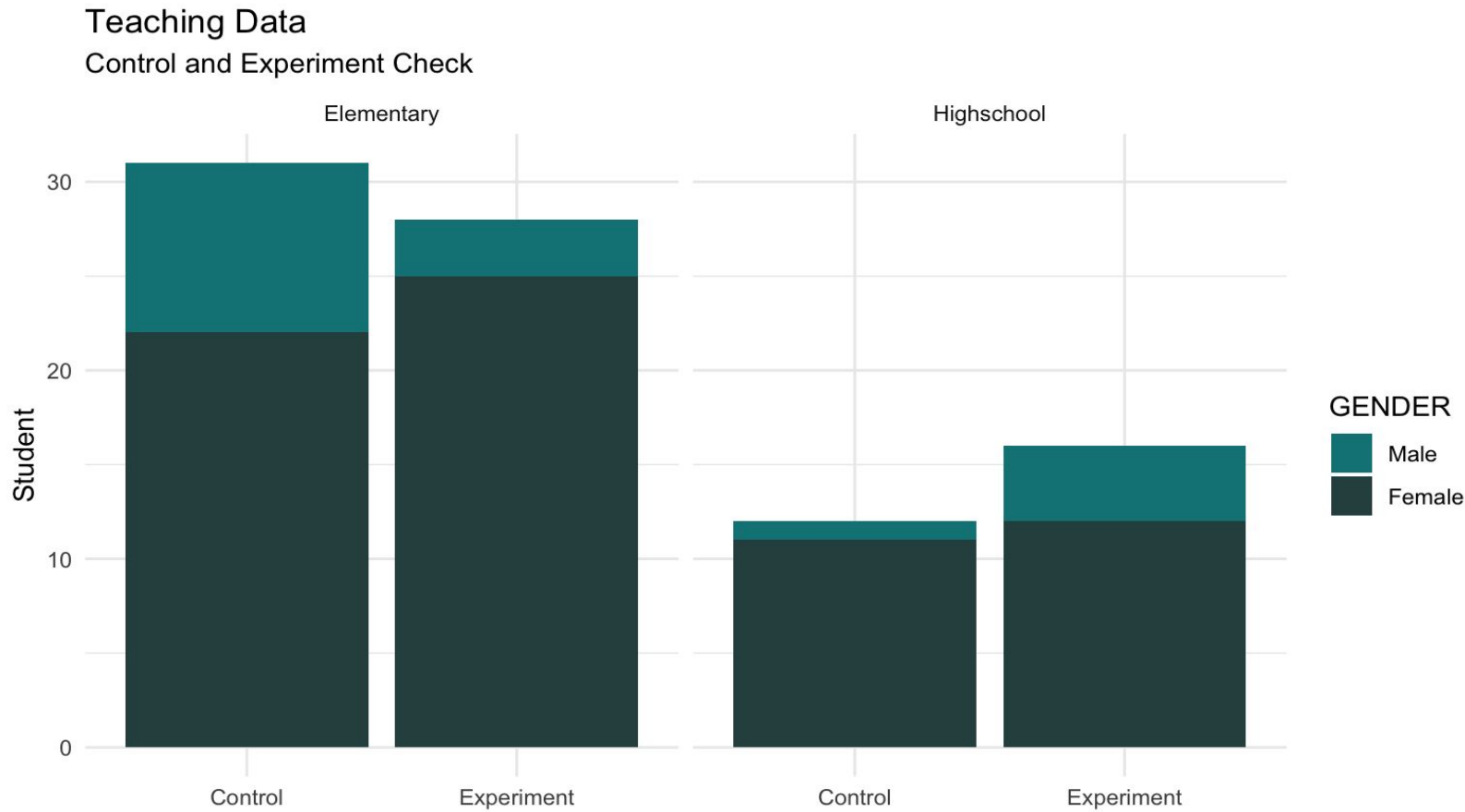
2. Participation bias



3. Lack of data



# Additional slide for questions



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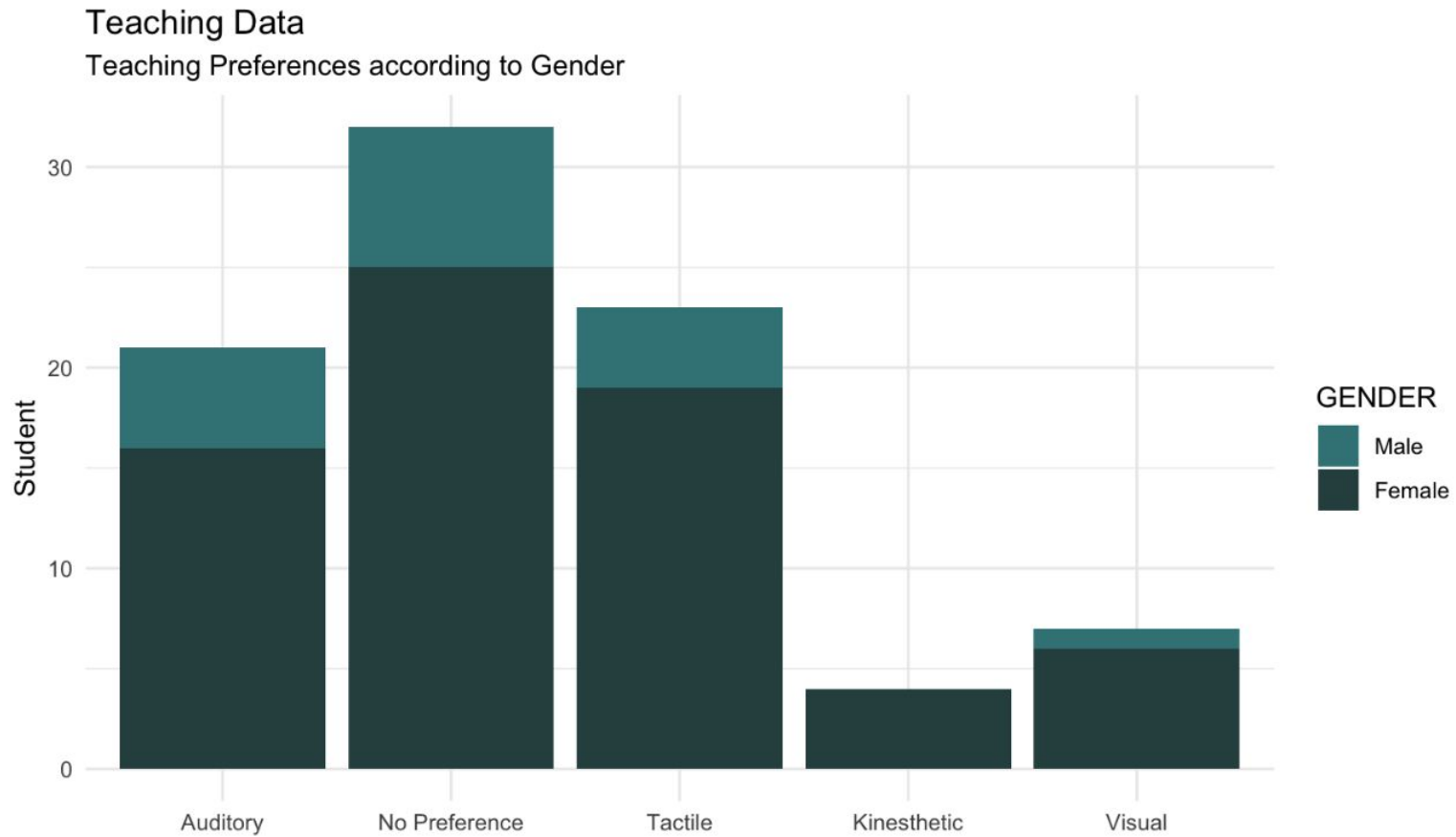
more female students



more elementary students than high school students



# Additional slide for questions



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Kinesthetic and visual preferences are less represented



Thank you  
very much  
for your  
attention