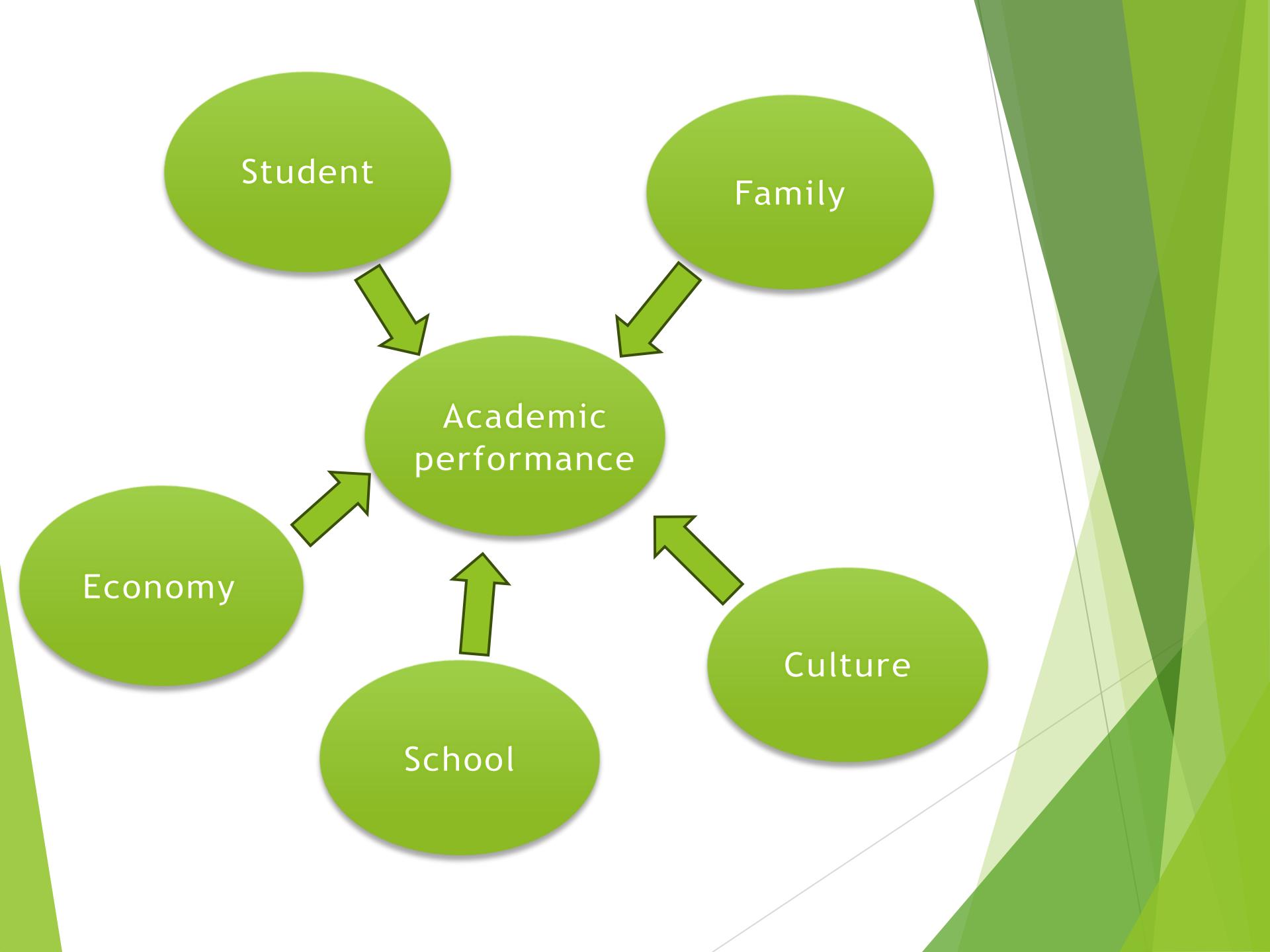


STUDENTS' ACADEMIC PERFORMANCE





Data summary...

1. A data set of 1000 students in a US school.
2. Gender : Females and males
3. Race/ethnicity : Groups A, B, C, D and E
4. Parental level of education : some high school, high school, some college, associate's degree, bachelor's degree, master's degree
5. Type of lunch they receive at school: standard, free/reduced
6. Test preparation course: completed or none

	gender	race/ethnicity	parental level of education	lunch	test preparation course	math score	reading score	writing score
0	female	group B	bachelor's degree	standard	none	72	72	74
1	female	group C	some college	standard	completed	69	90	88
2	female	group B	master's degree	standard	none	90	95	93
3	male	group A	associate's degree	free/reduced	none	47	57	44
4	male	group C	some college	standard	none	76	78	75
...
995	female	group E	master's degree	standard	completed	88	99	95
996	male	group C	high school	free/reduced	none	62	55	55
997	female	group C	high school	free/reduced	completed	59	71	65
998	female	group D	some college	standard	completed	68	78	77
999	female	group D	some college	free/reduced	none	77	86	86

1000 rows × 8 columns

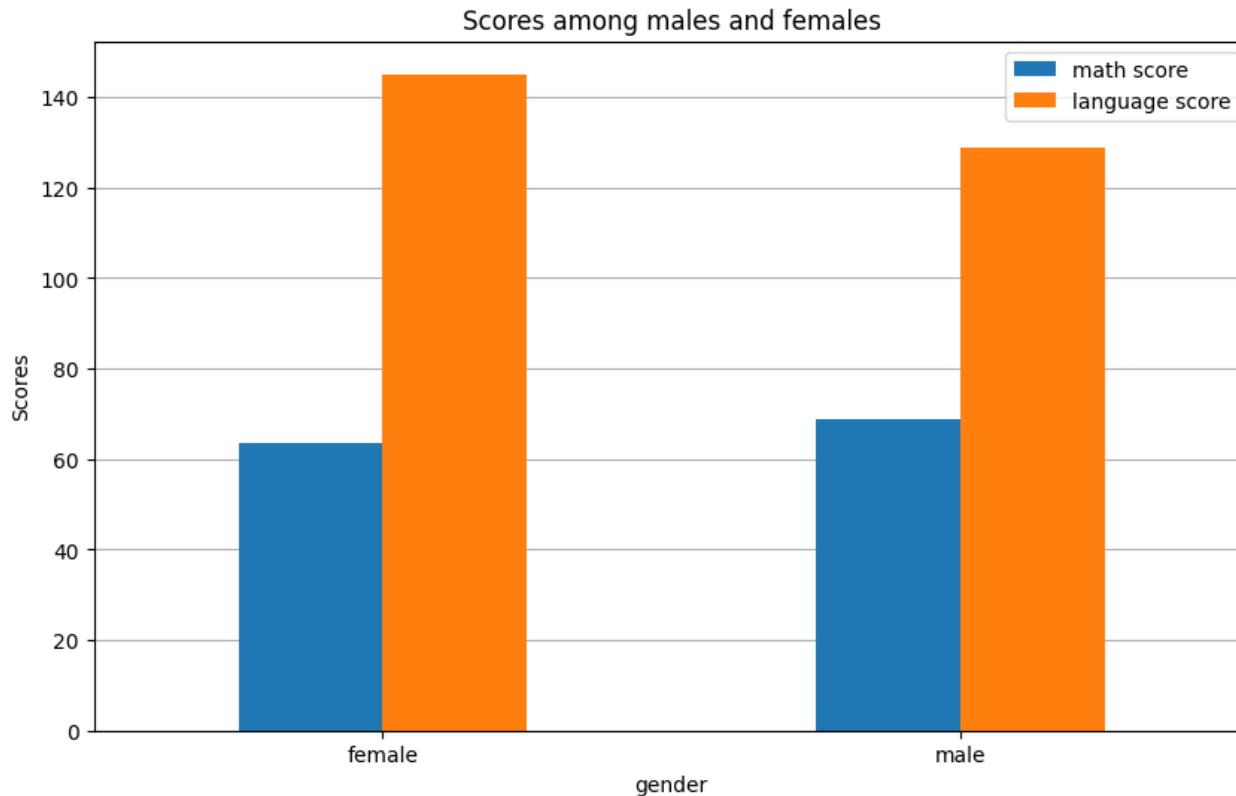


	gender	race/ethnicity	parental level of education	lunch	test preparation course	math score	language score
0	female	group B	bachelor's degree	standard	none	72	146
1	female	group C	some college	standard	completed	69	178
2	female	group B	master's degree	standard	none	90	188
3	male	group A	associate's degree	free/reduced	none	47	101
4	male	group C	some college	standard	none	76	153
...
995	female	group E	master's degree	standard	completed	88	194
996	male	group C	high school	free/reduced	none	62	110
997	female	group C	high school	free/reduced	completed	59	136
998	female	group D	some college	standard	completed	68	155
999	female	group D	some college	free/reduced	none	77	172

000 rows × 7 columns

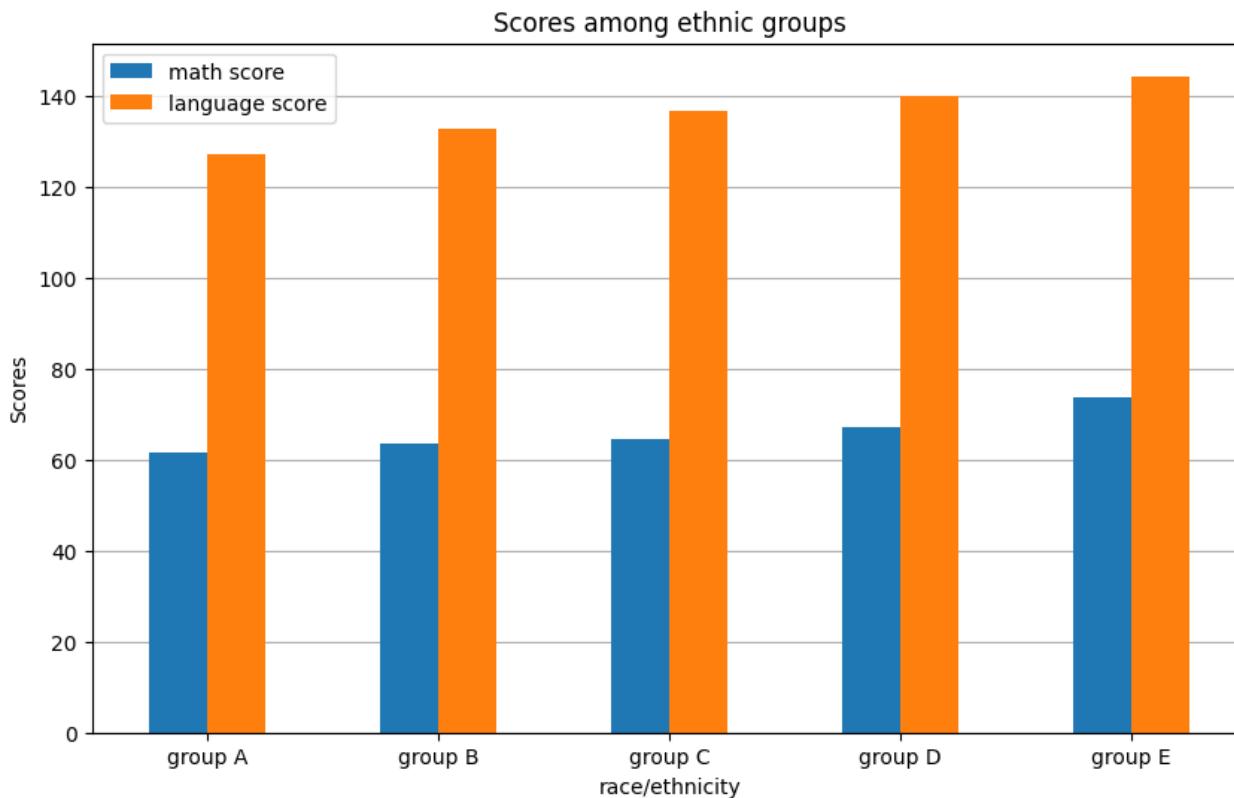
Hypothesis #1

Female students scored better than their male classmates.



Hypothesis #2

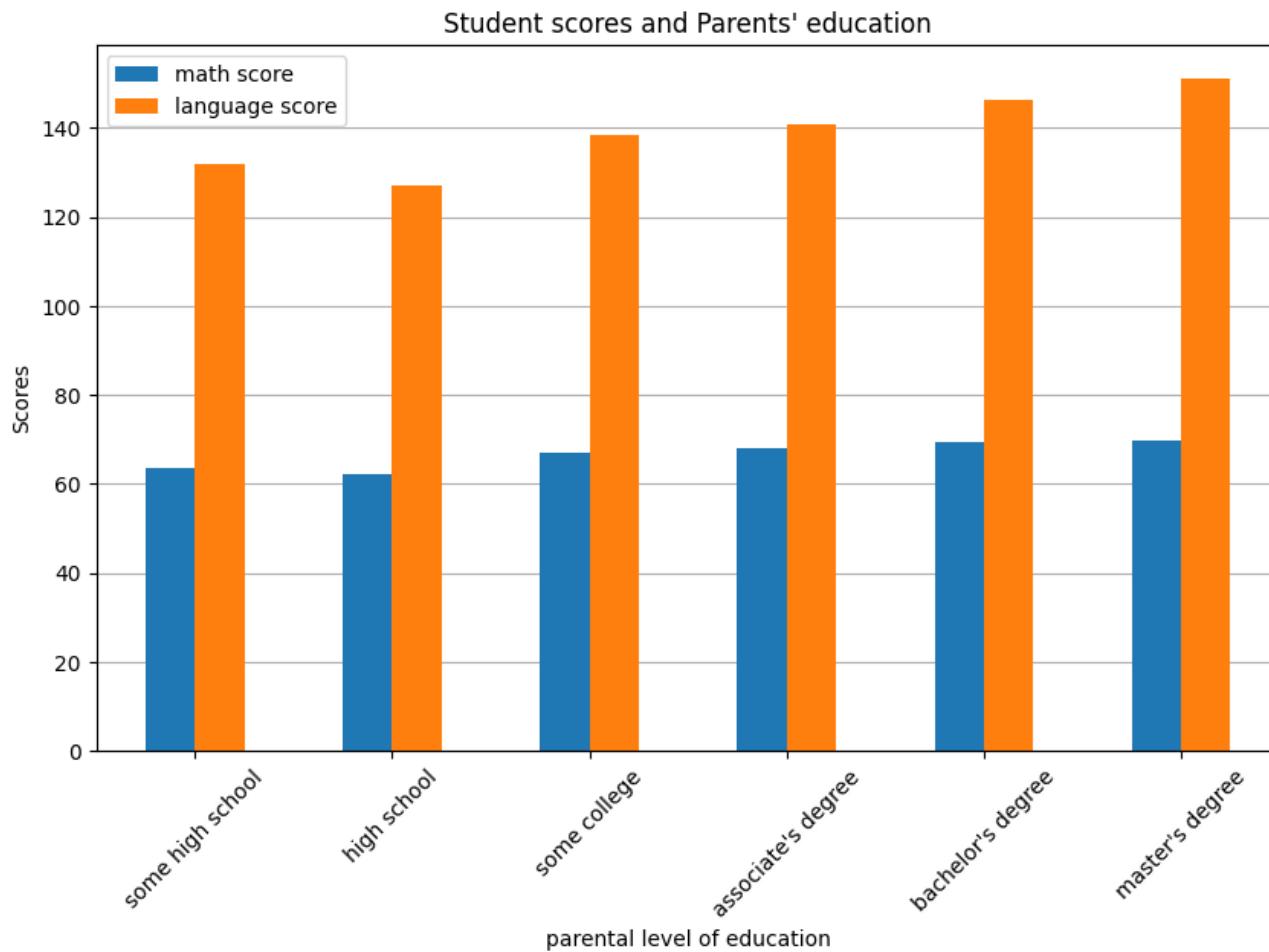
Students' ethnicity did not correlate with their scores.



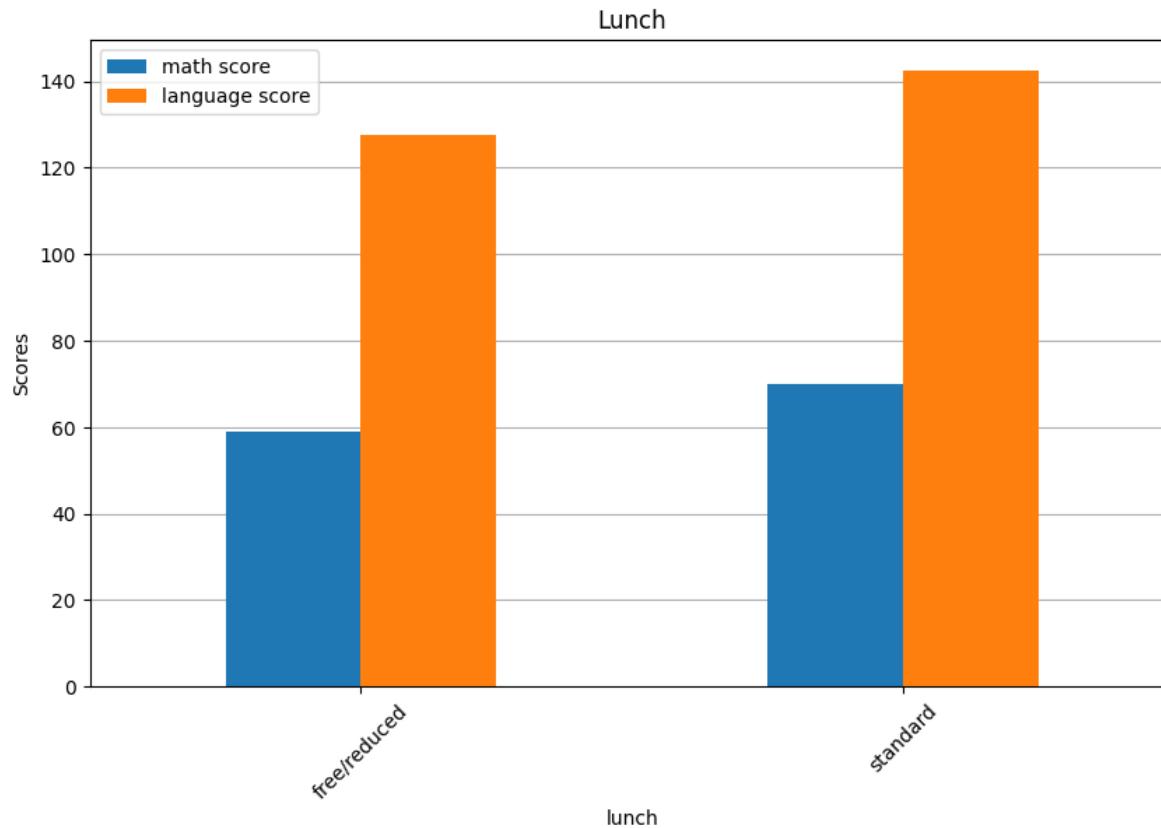
- ▶ Group A - White/Caucasian
- ▶ Group B - Black/African American
- ▶ Group C - Hispanic/Latino
- ▶ Group D - Asian/Pacific Islander
- ▶ Group E - Other/Multiracial

Hypothesis #3

Students whose parent held higher degrees obtained better scores

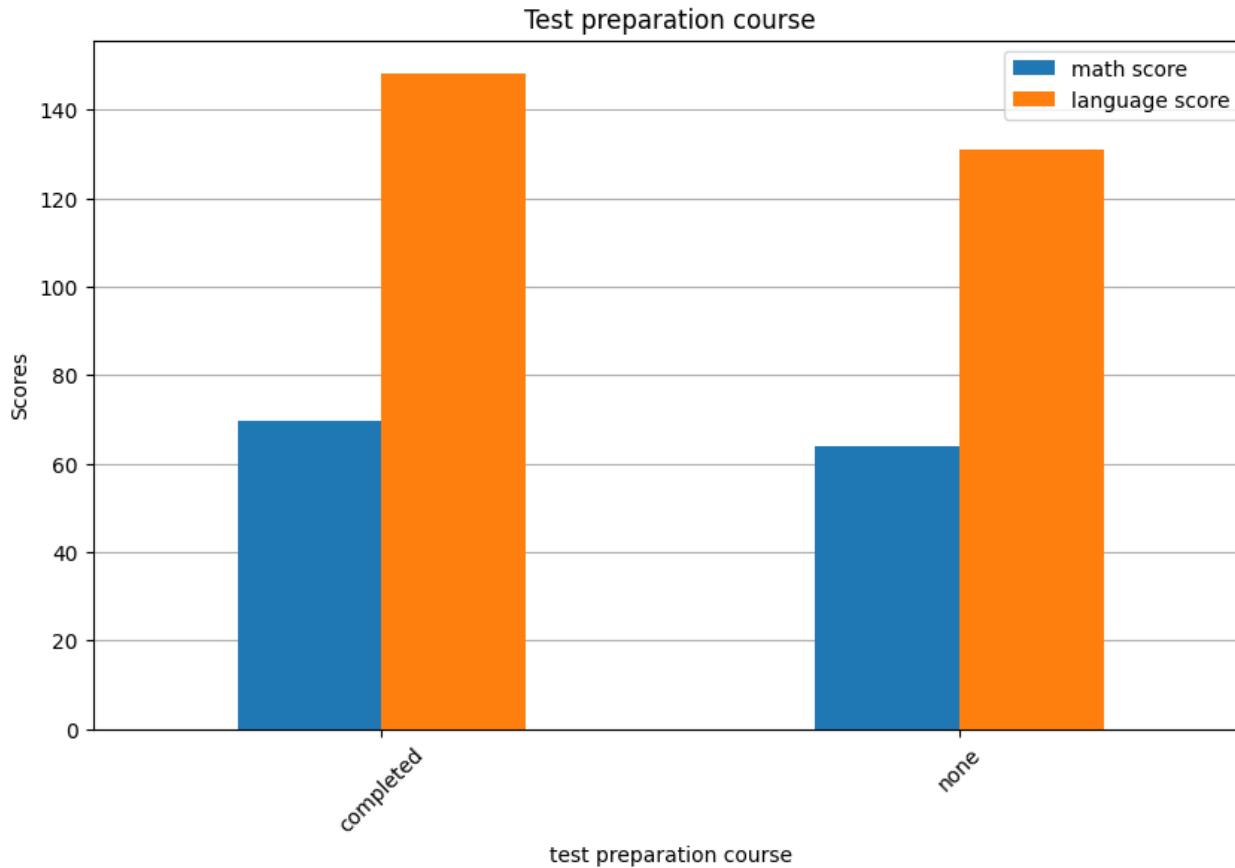


Hypothesis #4
students eating standard lunch scored
better than those eating a free/reduced
price one.



Hypothesis #5

Students who completed the “test preparation course” got higher scores



To sum up...

- ▶ Demographic factors
- ▶ socioeconomic factors
- ▶ School and Institutional Factors

Educators and policymakers design targeted interventions (i.e., test preparation course) to support students' learning outcomes.

Thanks!