

PROJECT I

University of Richmond, DA bootcamp
May 2020






INSPIRATION

Attending kindergarten is not a requirement of all states. Our project will seek to discover how children's performance in the states that require kindergarten compare to the performance of children in the states that do not require kindergarten attendance.





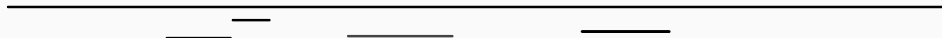
ASSUMPTIONS

- ✓ Data is normally distributed
 - ✓ Data is independent
 - ✓ Data is homogenous (The standard deviations are roughly equal)
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HYPOTHESIS

Attending kindergarten results in higher test scores and high school graduation rates.





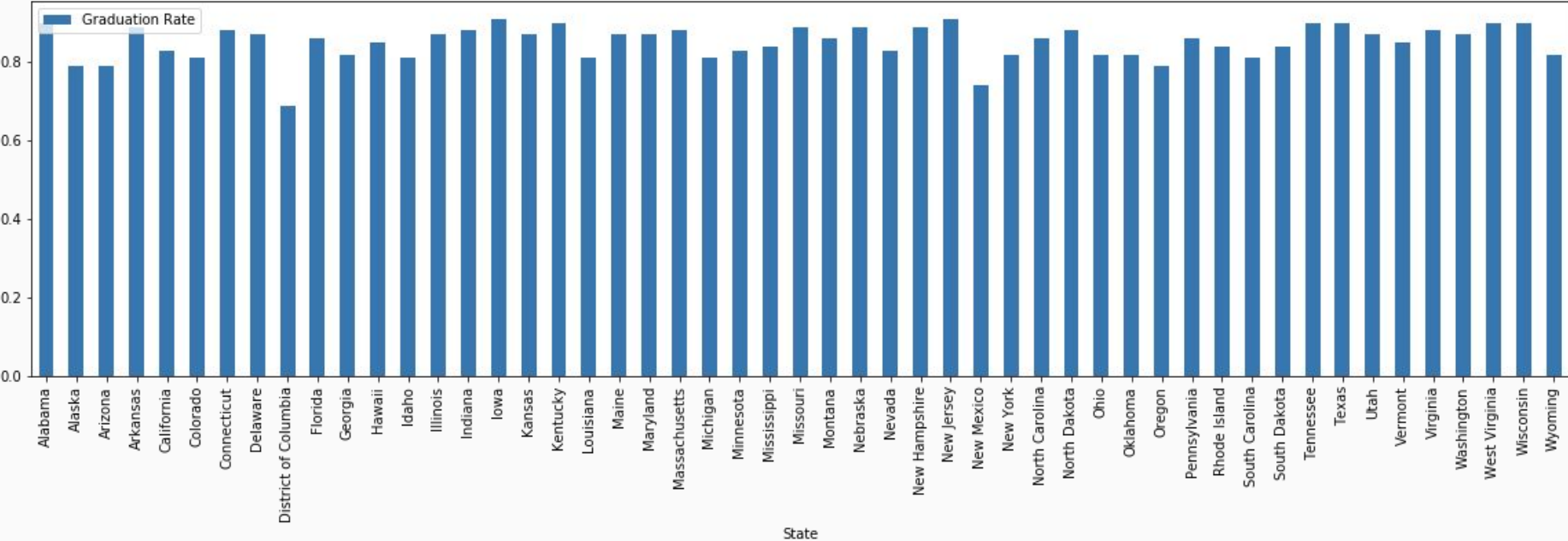
DEFINITION OF SUCCESS

We looked at 4th and 8th grade national test results as benchmark indicators of success, as well as successful completion of 12th grade or graduation rates.

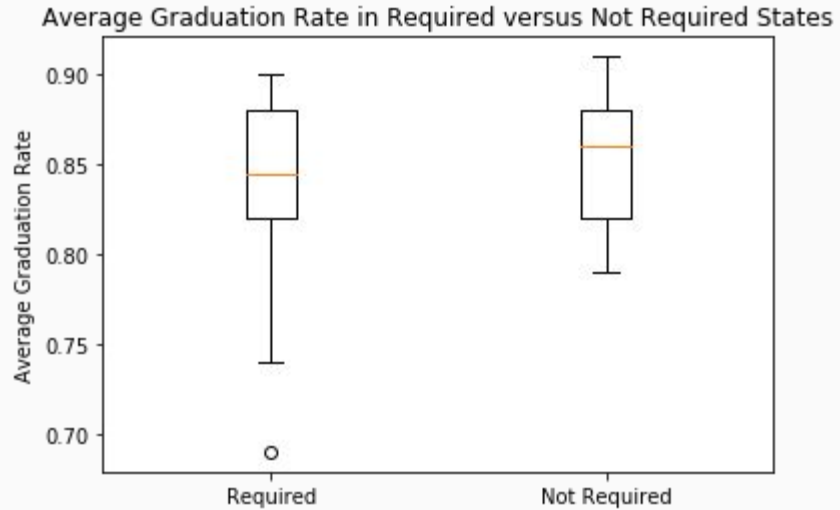


RESULTS ANALYSIS

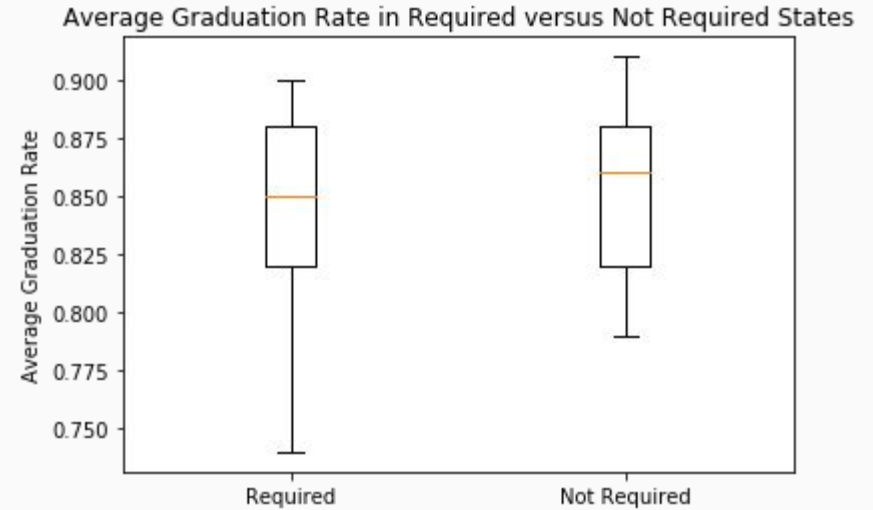
Graduation Rates by State



RESULTS ANALYSIS



The p value = 0.27



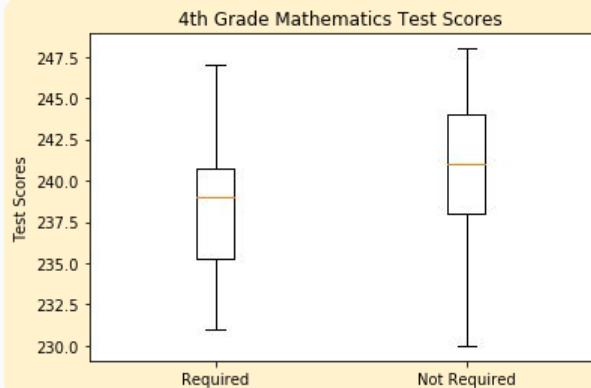
The p value = 0.63

RESULTS ANALYSIS

4th Grade Math

$p = 0.026054855644176138$

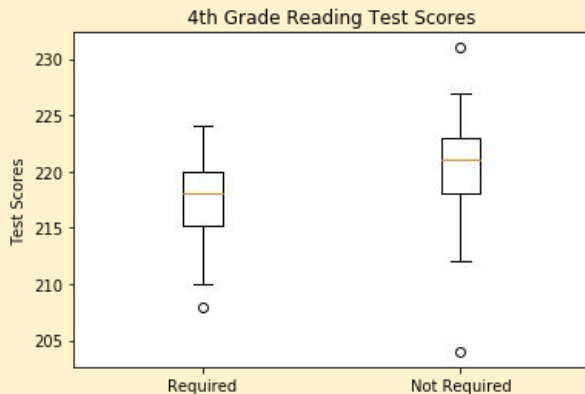
The difference is statistically significant



4th Grade Reading

$p = 0.0390621255330835$

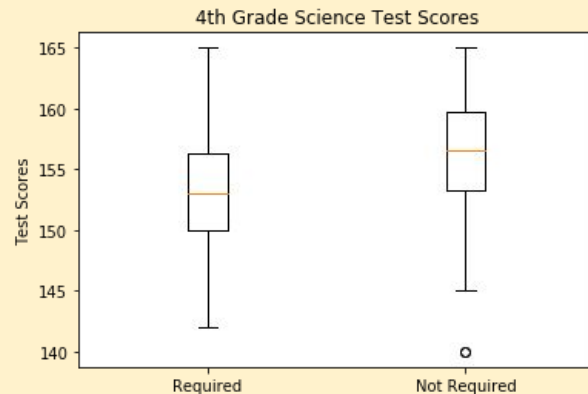
The difference is statistically significant



4th Grade Science

$p = 0.1250185924842891$

The difference is not statistically significant

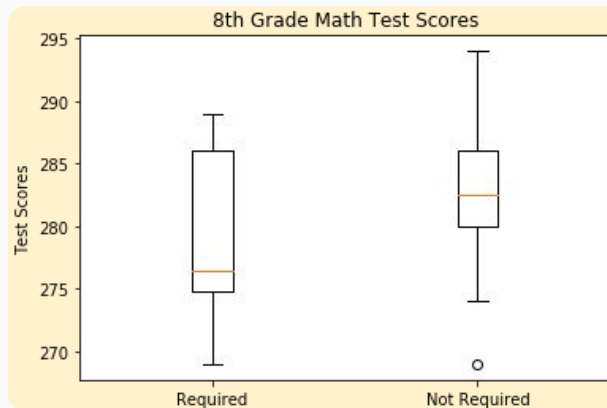


RESULTS ANALYSIS

8th Grade Math

$p = 0.03255688551735612$

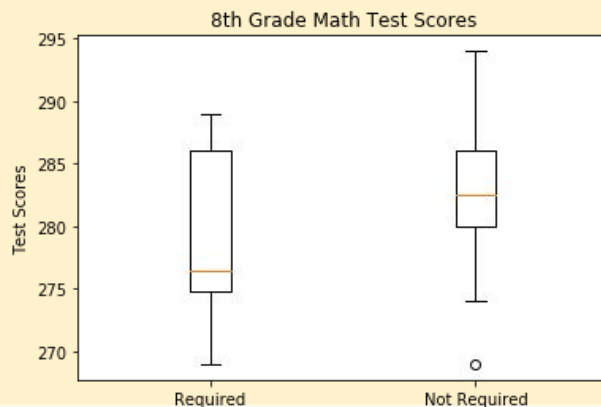
The difference is statistically significant



8th Grade Reading

$p = 0.025667799874275015$

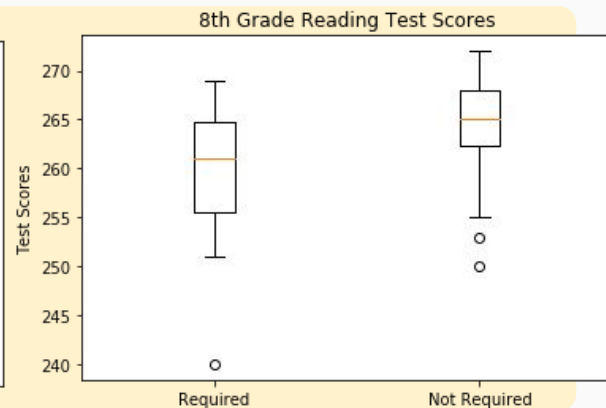
The difference is statistically significant



8th Grade Science

$p = 0.08518732218432806$

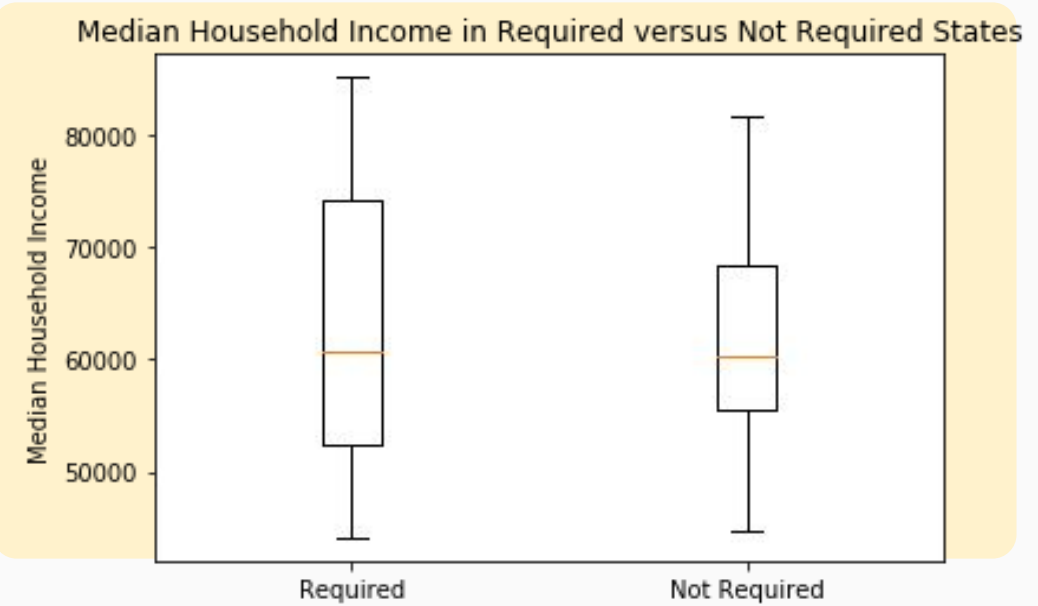
The difference is not statistically significant



RESULTS ANALYSIS

$p = 0.6960794922184232$

The difference is not statistically significant





CONCLUSION

We found our original hypothesis to be false. Our assumption that kindergarten attendance correlated to higher performance was incorrect.



RESOURCES

DATASETS

- [High school graduation rates 2018](#)
- [Kindergarten State Requirements 2018](#)
- [National Assessment of Educational Progress](#)
- [Median Household Income in the United States 2018](#)

PARTICIPANTS

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