

## Capstone Two Project Proposal

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Modern society has, as a goal, a well educated citizenship. What can we do to ensure our education system is operating as well as possible? For this project I will be making a proposal to the government of the State of Delaware, my home state, on spending levels necessary to improve educational outcomes. I will be submitting a proposal to the Delaware secretary of education, Mark A. Holodick, the Joint Finance Committee of the Delaware state legislature, and the governor, John Carney, on optimal spending levels in education and other factors to improve educational outcomes.

According to the Nation's Report Card report of 2019:  
<https://www.nationsreportcard.gov/reading/?grade=8>,  
<https://www.nationsreportcard.gov/mathematics/states/scores/?grade=8> the state of Delaware sits below the national average when it comes to results on reading (260 vs. 262) and math (277 vs. 281) tests at the eighth grade level. How can the state of Delaware improve its education system so that its scores are at or above the national average by the release of the next national report in 2024?

According to the state of Delaware 2023 budget,  
<https://legis.delaware.gov/BillDetail?LegislationId=119629> (page 55) the state has set up just more than 1.1 billion dollars for the purpose of paying school employees in the next year. However, records show that the Department of Education in fact paid out only 840 million dollars for this purpose during the 2022 school year. That means that there is an extra 250 million dollars in the budget that may go unused. What should the state of Delaware do with the money? How much can it afford to pay to get more staff in, and would that staff help raise achievement scores in the state?

For this project I will be making use of three publicly available data sets. The first is located at <https://data.delaware.gov/Education/Student-Assessment-Performance/ms6b-mt82>, It is a table of all the schools in the state that receive public funding and their average scores on various assessments. The second is located at <https://data.delaware.gov/Education/Student-Enrollment/6i7v-xnmf>, and it is a dataset of all the schools receiving public funding, as well as their enrollment numbers. The third dataset is <https://data.delaware.gov/Education/Educator-Average-Salary/rv4m-vy79>, and it includes every school's average salary paid to employees of various types. Importantly it also includes the number of employees of each type. With these three datasets I can combine them in order to find the student-teacher and student-staff ratio at each school as well as their achievement scores. I should then be able to make a model that creates ideal student staff ratios that will maximize the column containing

achievement scores. I can then compare the model to the existing state of Delaware records to make recommendations and keep with the budget outlined for next school year.