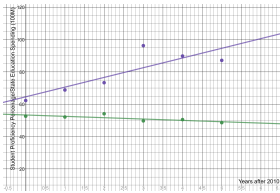


Group 1
The Relationship Between Math Proficiency and State Spending on Education

Hazen W. (66B), Anayah H. (66B), MJ W. (66A), Will F. (66A)

April is a math tastic. You'd think she'd be good at math from an early age, with a story that goes something along the lines of a math prodigy at a young age, with a story that goes something along the lines of a math prodigy at a young age, with a story that goes something along the lines of a math prodigy at a young age...



With math proficiency at the level it is, there are more stories like April's than not. This means that there is a need for better education policies, because despite high government education spending, the math proficiency is going down. Based on expected growth levels, the data we found on math proficiency shows a clear downward trend. In 2015, if this trend is accurate, we should have around 40% math proficiency. By 2025, we will have around 40% math proficiency. This is insufficient, and it will lead to students not getting into good colleges, and then not being able to get jobs.

The expected growth levels, according to the Minnesota Management and Budget website, are determined based on assessment results. They are based on average student improvement for students with similar scores statewide. With this data and the other data collected, we know that the state spending is going up (adjusted for inflation in 2019 dollars), and the percentage of students at expected growth levels in math is going down.

Right now Governor Walz is making a lot of promises about education, the new budget, and what is going to be done. But although they are all worthy goals, a big priority should be ensuring that students are passing their classes and learning everything they need to be. We can't improve our schools if we are busy worrying about whether that students are passing and are going to continue to pass. We need to figure out how to fix this problem, so that instead of focusing on ensuring MN students are learning the things they need to, we can focus on ensuring that they are learning in schools that are the best that they can be.

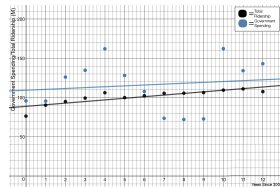
Year	Percent of Students at or Above Expected Growth in Math	State Spending on Education (per student) (2019 dollars)
2010	52.4%	\$6,228,798,211.66
2011	52.1%	\$6,890,043,612.07
2012	54.1%	\$7,331,719,095.68
2013	49.7%	\$8,622,872,025.00
2014	50.9%	\$8,980,442,203.85
2015	48.6%	\$8,712,084,038.91

"Spending is going up (adjusted for inflation in 2019 dollars), and the percentages of students at expected growth levels in math is going down."

Group 2
State Transportation Spending vs Public Transportation Ridership

Emilia (66B), Daniela (67A), and Jonas (66B)

In mid February, a female student at our school was riding a public bus alone. There were many people on the bus, and she was reading her business, when a group of two or three grown men started verbally harassing her. She put her headphones in to try and distract them, but they kept on yelling at her. They even went as far as to get off at her stop. No one helped her, even though she was 13 and they were grown men twice her age. Despite this, she still uses the public bus everyday. Why? Because she needs to.



Many people have no choice about how they get around. Public transportation isn't a pleasant for them, it's a necessity. This is why we need to put much more effort into public transportation. As you can see by our graph, the number of people riding public transportation is steadily rising, but the spending for public transportation has been generally all over the place. Clearly more and more people have been increasing public transportation into their daily routine. This is very good, but in order to sustain this growth, Minnesota needs to consistently keep up the budget. Public buses all over the country have saved 4.2 billion gallons of gasoline each year. We need to change the fact that about 1 in 5 women are sexually assaulted in their lifetimes, and 6 in 10 are harassed on public transport. Still many thousands still don't have any other way to get around.

We need you to help make sure that the public buses and other transportation options are safe, clean and easy to ride on. We need to make sure that nobody feels uncomfortable or unsafe on the only option they have.

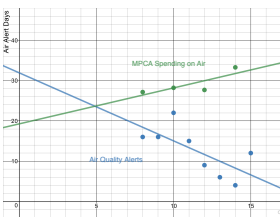
Year	Ridership on public transportation (per 1000 people)	Government spending on public transportation (per 1000 people)
2004	79.3	85.7
2005	90.3	85.4
2006	94.9	120.0
2007	96.3	134.6
2008	106.1	162.1
2009	96.3	126.1
2010	102.3	107.7
2011	105.4	73.5
2012	105.5	72.0
2013	106.3	72.7
2014	106.7	162.2
2015	116.8	168.2
2016	107.8	143.1

According to the data, public ridership is always upward. We need to spend more on public transportation to help people who don't have any other choices.

Group 3
Minnesota Air Quality vs MNPCA Spending on Air

Jackson S. (66B), Leanne E. (64B), Chris K. (67A), and Owen F. (66B)

Outside on a hot summer day. You get a notification on your phone. "Air quality warning: heavy ozone." You get home, but your asthma is acting up. You can't catch your breath and you start coughing. You reach for your inhaler, but it isn't doing anything. You have to go to the hospital (imagine this happening to you). People with respiratory conditions are at an increased risk because of air pollution in Minnesota.



We have gotten our information from the pollution control agency website. As you can see in our graph we have that air quality alerts and spending on the Y axis, and the past years on the X axis. As you can see the air quality has been getting better through the years, and a proportional to state spending. The lines on our graph reflect that the positive changes in air quality are directly related to the amount of state funding for the pollution control agency.

We believe that the state of Minnesota could be spending more money on figuring out a way to purify our air and reduce it. We also think that some state regulations should be applied. Companies that produce more carbon dioxide should pay more in taxes to discourage them to produce carbon dioxide.

Year	Air Quality Days	MNPCA Spending on Air (Adj)
8 2008	16	27,156,432.11
9 2009	16	
10 2010	22	28,211,507.14
11 2011	15	
12 2012	9	27,679,512
13 2013	6	
14 2014	4	33,287,129
15 2015	12	

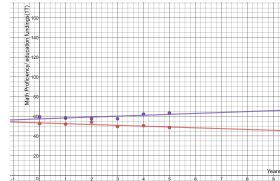
Source: Minnesota Pollution Control Agency

Minnesota has improved its air quality. In 2010, it had 22 days of air quality alerts that's the highest it's ever gotten.

Group 4
Math Proficiency in 8th Grade vs State Education Spending

Mahan Y. (66B), Julie W. (66B), Corbett O. (67B), and Gabby H. (67A)

Chad Michael an 8th grade student who goes to open world learning community, an EL school. Chad is struggling with his proficiency in math. Chad was then able to get extra help with math and with preparation for the MCA. After a few weeks of getting extra help Chad was able to meet proficiency on the MCA. If we are able to get more funding to be set aside for extra help for students who struggle in math, proficiency percent in math would be increased.



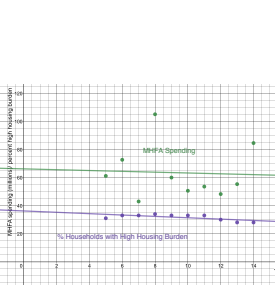
We looked at the data from the Minnesota dashboard the data we found wasn't as good. The math proficiency in Minnesota is getting lower throughout the years since 2010 to 2015. The goal we have for math is to get it a good at reading proficiency. The amount of money we are spending for math is lower than it is for reading. So our goal is if we spend the same amount of money like we do for reading we will be getting better results for math.

Year	% Proficient in Math	Adj 2019 PPA
2010	52.60%	\$5,939.87
2011	52.10%	\$5,814.30
2012	54.10%	\$5,751.46
2013	49.70%	\$5,763.07
2014	50.50%	\$6,226.08
2015	48.60%	\$6,343.48

Math education funding is helpful for students who struggle because having education funding can help hire people who help students understand the topic.

Group 5
Households with High Housing Burden vs MHFA Spending

Kian D. (66B), Joshua O. (66B), and James V. (67A)



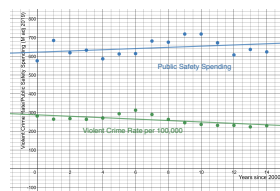
Year	% with high housing burden	Adjusted to 2019 Dollars
2005	31%	61,136,069.43
2006	33%	72,645,075.22
2007	33%	42,955,900.69
2008	34%	105,067,762.45
2009	33%	59,984,092.28
2010	33%	50,575,538.25
2011	33%	53,548,328.96
2012	30%	48,215,496.47
2013	28%	55,297,893.76
2014	28%	84,557,900.34

Access to affordable housing is a key component of a thriving economy. Housing values are increasing and homeowners are taking chances with alternative financing methods.

Group 6
Violent Crime Rate in MN vs Spending on Public Safety and Corrections

Demare G. (67A), Cyrena R. (67A), Dani B. (66B), and Sami O. (66B)

Two kids were walking back from a local place called Jay Cup when someone ran past them and nearly knocked one of the girls over. The man was running because he was being chased by the police. After the girls witnessed this they got worried and ran to the closest house which was one of the girls house. Later they were going to walk back to the other girls house. One of the girls phone was dead and did not see a text from their mom telling them not to go home, so the girls started yelling and when they were at her house the man who was being chased had a gun pointing at the cops and the cops had their guns pointed at the man. The neighbors were yelling at the girls to get inside but the door was locked so the were banging on the door when finally one of the girls mom opened the door and they came crashing in.



We got our data from the disastertcenter.com. What we have learned from our graph is that the violent crime rate has been decreasing and that public safety spending has been increasing. Since the public safety spending has increased there has been less violent crime due to the contributions.

We advocate to keep investing in public safety spending so that our community can stay safe.

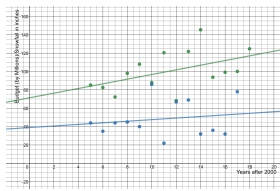
Year	Year Adj	Violent Crime	Public Safety/Correction Adj	2019
2000	0	281		575,487.05
2001	1	264		684,173.91
2002	2	267		616,350.51
2003	3	263		632,442.99
2004	4	270		586,222.90
2005	5	293		612,017.67
2006	6	312		613,990.81
2007	7	289		681,078.85
2008	8	283		674,932.92
2009	9	245		716,425.14
2010	10	236		716,425.14
2011	11	231		671,263.97
2012	12	231		606,840.10
2013	13	223		636,115.52
2014	14	229		623,226.34
2015	15	243		680,410.26

The Violent Crime rate is dropping statewide, to keep this number decreasing we advocate that more money goes into public safety spending.

Group 7
State Transportation Spending vs Snowfall: a Story of Poor Snow & Ice Removal

El B. (64B), Chier P. (64A), Leo G. (67A), and William P. (67A)

Have you ever been driving in the winter desperate to get home? It is a complete workout, and the roads are covered in snow. Even though it has been snowing for a while, you can see that the response time of the plows is slow. Also, there's a lack of plowing because the snow that should have been scraped off by the previously passing plows has been packed down by passing cars. Your scared because you. Are risks to walk the storm out but because the roads are so snowy that if your driving you will slide off the road. Well that should not be an issue and our group wants to help fix.



We got our data from the MNDOT and the DNR. In the graph you can see a lot of inconsistencies in the budget and snow. You can't change anything about the snow, but have inconsistencies this large, it is a issue. If this continues then we will either have lots of snow and not enough money, or lots of money, but not a lot of snow. This wastes money and we want to change that.

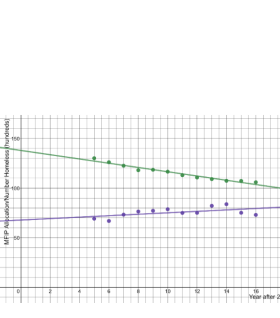
As climate change continues in Minnesota will see more snow. Having faster response times (getting plows and salt trucks out) to snow on highways will help keep the snow off as they drive down have time to get home and off the roads. It will also decrease the number of injuries related to poor snow and ice removal. We could also strategically place heating elements in roads that already need repairs we could also make drains that connect to storm drains directly at bottom of hill so the water from the snow that's melted doesn't harm in its top the bottom of hills. Those drains would look a bit like cattle catchers. But to do all this the transportation department will need extra funding to complete these tasks but it will be worth it in the end. In conclusion we think it is smart to invest in the future, what about you?

Year	Budget (Millions)	Yearly Snowfall (inches)
2005	85.3	44
2006	82.5	35
2007	72.3	44
2008	89	45
2009	107.9	40
2010	88	66
2011	120.5	22
2012	68.3	67
2013	121.9	69
2014	145.5	32
2015	93.8	36
2016	99.2	32
2017	100.1	78
2018	124.7	N/A

Our group believes that we need to ensure more, and steady, transportation funding in order to keep Minnesota's drivers safe.

Group 8
Homelessness in Minnesota vs MFIP Allocation

Sebastian B. (67A), Leo Doh W. (62A), Gabo K. (67A)



Year (after 2000)	MFIP (adj 2019)	Number Of Homeless (hundreds)
5	\$130.16	69.18
6	\$126.09	66.85
7	\$122.60	73.23
8	\$118.07	76.44
9	\$118.49	77.18
10	\$116.58	78.69
11	\$113.01	75.68
12	\$110.72	74.95
13	\$109.12	73.06
14	\$107.38	82.14
15	\$107.25	83.77
16	\$105.91	73.04

Homelessness is increasing statewide and the MFIP allocation has fallen in 2019 dollars every year. The causes of homelessness are many, but we should do more to help.