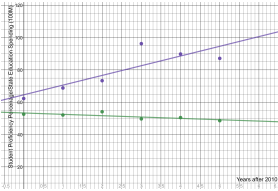


Group 1  
The Relationship Between Math Proficiency and State Spending on Education

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

April is a math tuck. You'd think she'd been good at math from an early age, with a story that goes something along the lines of a math prodigy at a young age, she assisted her friends with their math, leading her to eventually become a tutor. But that's not her story at all. Instead, it's a story of struggling with math to such a point that she was about to fail high school. When she told her story, she said about her math skills, "I was terrible, so terrible, in fact, that I was in danger of not graduating high school." With a lot of help and tutoring, she was able to pull through. But this needs to change.



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 show a clear downward trend. In 2010, if this trend is accurate, we should have around 45% 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 the 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.

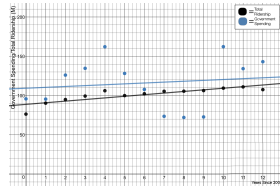
Year	Percent of Students at or Above Expected Growth Levels in Math	State Spending on Education (in Millions of Dollars)
2010	52.4%	\$6,228,798,817.66
2011	52.1%	\$6,890,063,812.07
2012	54.1%	\$7,331,719,095.68
2013	49.7%	\$8,622,872,025.00
2014	50.9%	\$8,980,442,203.69
2015	48.6%	\$8,712,094,038.91

"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 Spending

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

In mid February, a female student at our school was riding a public bus alone. They 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 smartphones 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, and this is why we need to put much more effort into public transportation. According to the MN dashboard statistics about government spending, the total transportation is always steadily increasing, while the spending is rocky and fluctuating. Around 61 percent of women will experience sexual harassment in their lifetimes, but many thousands of people still ride public buses and transportation.

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

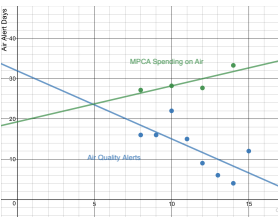
Year	Rebus taken on public transportation (in millions)	Government spending on public transportation (in millions)
2004	78.3	95.7
2005	90.3	96.4
2006	84.9	100.0
2007	96.3	134.6
2008	104.1	162.1
2009	99.9	128.1
2010	102.3	107.7
2011	105.4	73.5
2012	105.5	72.0
2013	108.3	72.7
2014	109.7	162.2
2015	110.0	134.2
2016	107.5	143.1

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

Group 3  
Minnesota Air Quality vs MNPCA Spending on Air

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

Outside on a hot summer day. You get a notification on your phone. "Air quality warning: heavy clear." 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 listed an air quality alert 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 restore 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.

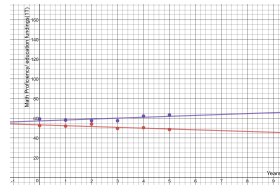
Year	Air Quality Days	MNPCA Spending on Air (Adj)
8 2008	16	27,155,432.11
9 2009	16	
10 2010	22	28,211,507.14
11 2011	15	
12 2012	9	27,679,512
13 2013	6	
14 2014	4	33,287,129
15 2015	12	

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

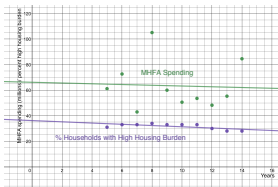
Maeah Y. (66B), Juse W. (66B), Carolee O. (67B), and Gabby H. (67A)



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%	\$5,753.07
2014	50.50%	\$6,226.08
2015	48.60%	\$6,243.48

Group 5  
Households with High Housing Burden vs MHFA Spending

Xian D. (66B), Joshua O. (66B), and Jame V. (67A)

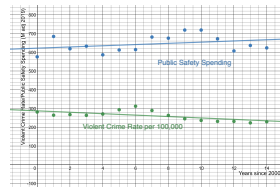


Year	% with high housing burden	Adjusted to 2019 Dollars
2005	31%	61,138,089.43
2006	33%	72,845,076.22
2007	33%	42,865,900.69
2008	34%	105,067,762.45
2009	33%	59,994,092.28
2010	33%	52,939,893.76
2011	33%	53,548,328.96
2012	30%	48,215,496.47
2013	28%	52,297,893.76
2014	28%	84,557,900.34

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

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

Two kids were walking back from a local place called Icy 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' houses. 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 walking and when they were at her house the man who was being chased had a gun pointed 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 man being on the door when they one of the girls mom opened the door and they came crashing in.

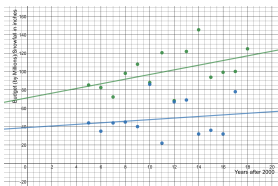


Year	Year Adj	Violent Crime	Public Safety/Correction Adj 2019
2000	0	281	675,487.06
2001	1	264	684,173.91
2002	2	267	616,365.51
2003	3	263	632,442.99
2004	4	270	586,222.90
2005	5	283	630,017.67
2006	6	312	613,990.81
2007	7	289	681,075.89
2008	8	282	674,932.92
2009	9	245	716,425.14
2010	10	236	716,425.14
2011	11	231	671,263.97
2012	12	231	606,840.10
2013	13	232	636,116.52
2014	14	229	623,228.34
2015	15	243	680,410.26

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

El B. (64B), Omer 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 without, 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 plows to wait 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 it.



As climate changes becomes a increasingly larger problem, there will be more snow, and road conditions will get harder to combat and it will cause more issues. As shown on our graph. The budget is ahead but as climate change gets worse the graph will go up more drastically and as graph shows the more snow the more the budget does not go up fast enough and gets close to the amount of snow. So as climate change progress we will have winters with more snow.

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 at bay while drivers 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 melted doesn't turn in to ice at the bottoms of hills. These drain would be 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	88	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	53.8	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, Leo Don, Gabie



Year	MFIP adj	Number Of Homeless
5	\$126.09	69.18
6	\$122.60	67.25
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	\$105.12	73.06
14	\$107.38	82.14
15	\$107.25	83.77
16	\$105.91	73.04