From Fidgeting to Fine Writing

Abstract - Kids struggle with handwriting all the time and many people want a solution. So I'm going to try and fix that. I will use a simple fidget concept, and see if it improves my handwriting.

Category - Health and Human Behavior

Introduction

Can a fidget improve your handwriting?

Research

I researched things that play big roles in handwriting and ways to improve handwriting.

Question

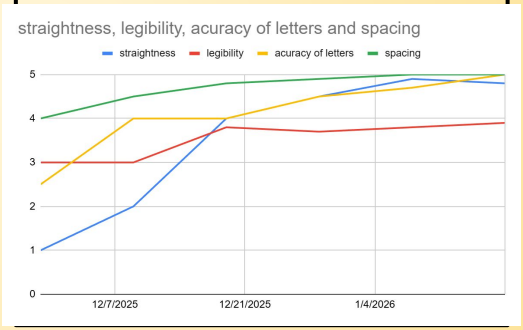
Hypothesis/Prediction

Can you improve your handwriting by increasing your finger strength and control?
By using a fidget and writing every day, you will see major improvement.

Procedures/Materials

I modified my pencil in to a fidget using materials I had. I wrote the same sentence in a book every day to gage my improvement.

Results



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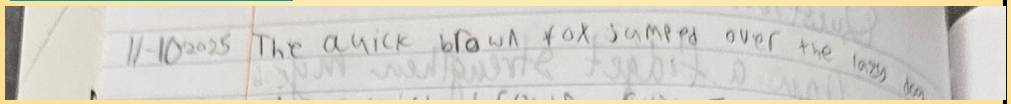
begining



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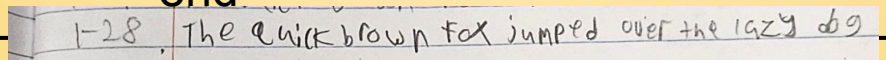
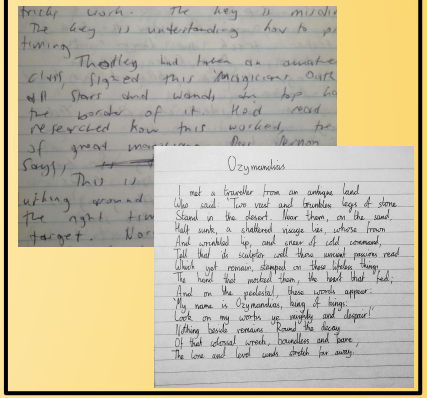


Conclusion/Discussion

I found that the fidget worked. I want to try with multiple people and different fidgets.



References

I used online resources to research grip strength and handwriting scale.

Introduction

A lot of kids struggle with their handwriting, whether that's keeping their words on the line or keeping their letters straight. My teacher noticed this problem in me and I decided to improve. I love writing and the fact that my teachers couldn't read it upset me. I decided to create a fidget on the end of my pencil that I could use to improve my handwriting and potentially make me a better writer.

Research

I went and I researched what things play a big part in handwriting and I found that finger strength plays a big part so me and my teacher made a fidget to help with that. When my teacher and I got a fidget that worked I used it everyday and wrote the same sentence in a notebook everyday. Something else I researched was the average grip strength for different age groups and I tested everyone in my class and found the averages for girls and boys who did and didn't have the fidget.

Question/Hypothesis/Prediction

Question: Can I improve my handwriting with a fidget?

Hypothesis/Prediction: I think that the fidget will improve my handwriting exponentially because it will help me gain finger control and then if I gain finger control it will improve my handwriting.

** I worked on this since the first day of school!

Procedures

1. Research handwriting, hand strength, how handwriting is taught and not taught.
2. My teacher noticed I was struggling with a pencil and taught how to work on my grip strength.
3. I grabbed a pencil and a hex nut, that was sized slightly smaller than the pencil shaft.
4. Starting at the pointed end of the pencil, I twisted the nut down the pencil all the way to the eraser.
5. I worked on this to be sure the nut moved smoothly up and down the pencil.
6. I used the fidget every day for a couple months.
7. About half way through December I switched to a wing nut, to try something different.
8. I kept track of how my handwriting improved by writing the same sentence in a notebook everyday.
9. I analyzed my writing, created graphs and wrote the results and conclusions.

Results

My handwriting improved and the chart below shows the average ratings from my classmates. My classmates saw a lot of improvement in the straightness and accuracy due to the fidget. Overall I have shown massive improvement in my handwriting. What I did in the experiment was I used the pencil fidget and wrote the same sentence everyday.

categories	straightness	legibility	accuracy of letters	spacing
11/29/2025	1 out of 5	3 out of 5	2.5 out of 5	4 out of 5
12/9/25	2 out of 5	3 out of 5	4 out of 5	4.5 out of 5
12/19/2025	4 out of 5	3.8 out of 5	4 out of 5	4.8 out of 5
12/29/2025	4.5 out of 5	3.7 out of 5	4.5 out of 5	4.9 out of 5
1/8/2026	4.9 out of 5	3.8 out of 5	4.7 out of 5	5 out of 5
1/18/2026	4.8 out of 5	3.9 out of 5	5 out of 5	5 out of 5

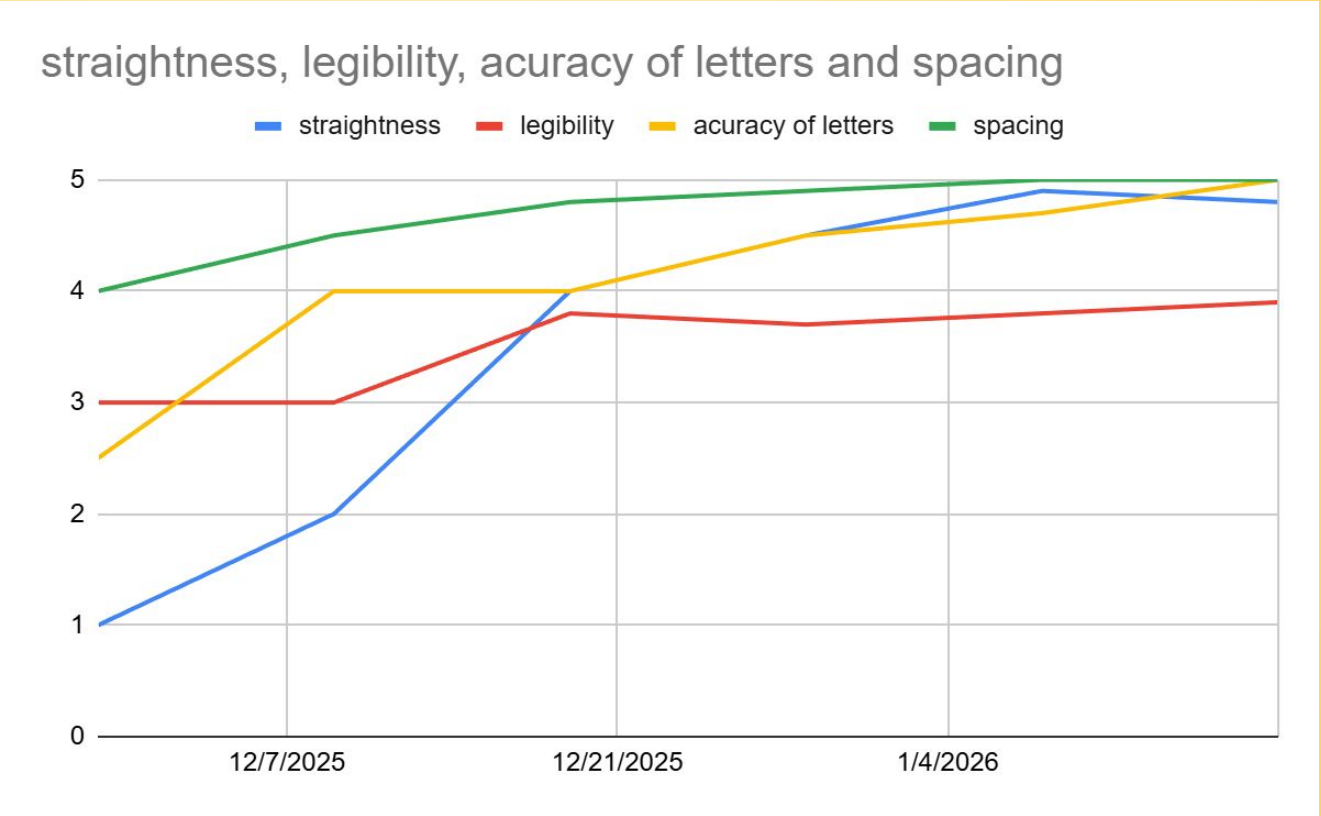
Results Continued

In this experiment, I had to admit that my handwriting was not good and it got in the way of me being able to actually write well. Once I owned this, I was able to work on my handwriting and become a better writer which I didn't necessarily think would be an outcome.

Somethings that could have gone wrong - I talked with a tutor to get help, and when I admitted that I missed some of the data collection, he told me that meant I didn't care… this held me back because I was worried. Then I realized that science is all about learning from my mistakes. This was game changer and I was able to continue with the project, work hard and see an impact. If I didn't make this mistake, I would have had more results, but maybe wouldn't have worked as hard because the error motivated me to be better.

Results Continued

Graph of my classmates average ratings of my handwriting.



Conclusion/Discussion

My hypothesis was: I think that the fidget will improve my handwriting exponentially because it will help me gain finger control and then if I gain finger control it will improve my handwriting. I was right, my handwriting improved substantially and it is very noticeable how much it improved. My project went well and pretty smooth. My hypothesis was correct about the fact that it would improve my handwriting. I don't know if my finger control necessarily improved but it is likely to assume that. Learning that I had control over this issue really made me improve - it was mindset and learning from mistakes. Something I would do differently is I would want to try with multiple people and use different fidgets to see which works better. I want to continue the project and track my progress. Maybe I can help other kids with their handwriting too!

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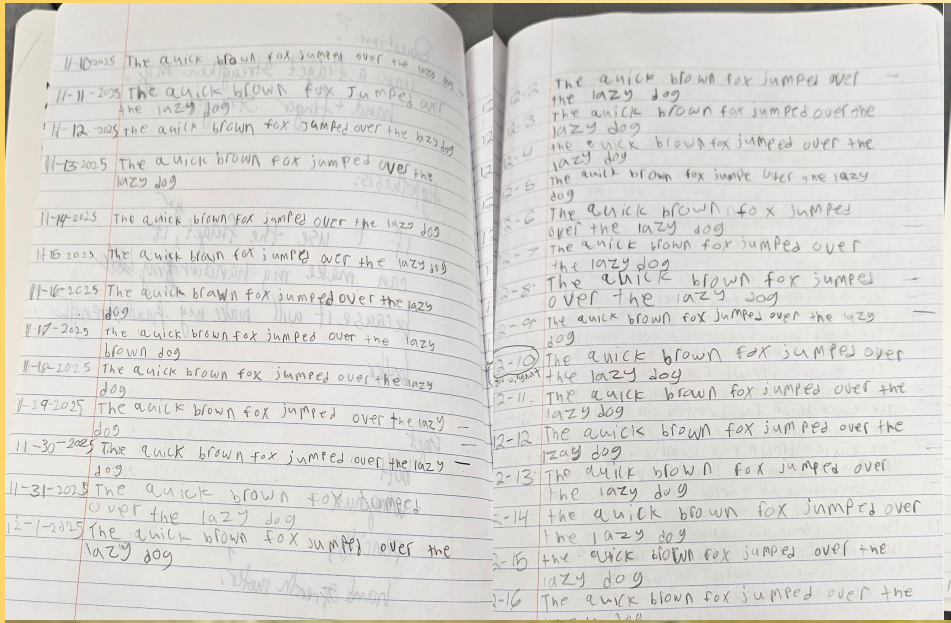
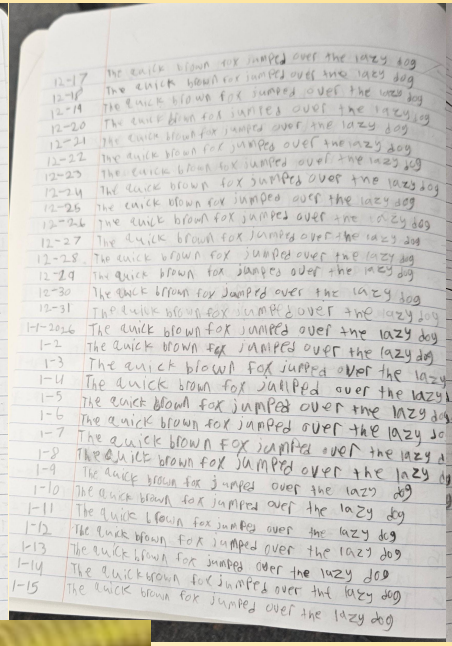
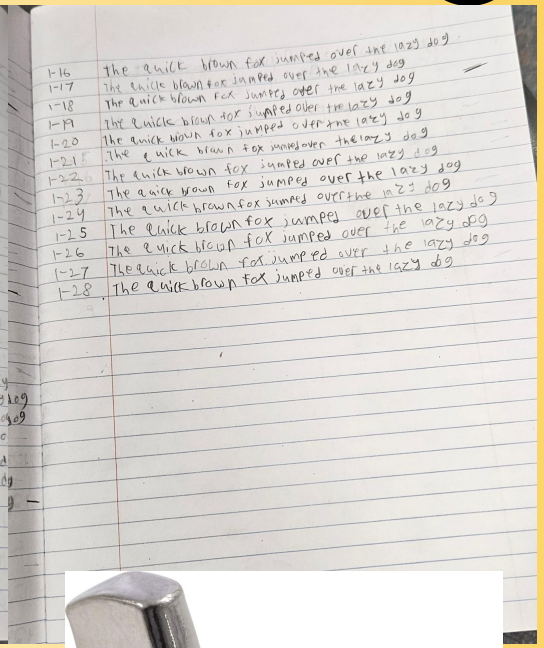
Notes:

https://docs.google.com/document/d/1mzVoAoljuJSWDTDq-Kr-Rf8MmQAoSdcP7DhL6JTdF08/edit?tab=t.0







References

https://www.oxfordhealth.nhs.uk/wp-content/uploads/sites/22/2021/08/Handwriting-assessment-screening-tool.pdf This is a handwriting assessment that I used to help me with scoring my improvement.

https://pubmed.ncbi.nlm.nih.gov/17186303/#:~:text=Though%20female%20athletes%20were%20significantly,Sports%20/%20physiology This taught me grip strength and the connection between that and my handwriting.

https://andrewhutchinson.com.au/2014/03/17/handwriting/ Letter formations and the erosion of handwriting.