



# CALIFORNIA SCIENCE & ENGINEERING FAIR 2019 PROJECT SUMMARY

<b>Name(s)</b>  <b>Audrey Sherf</b>	<b>Project Number</b>  <b>J0421</b>
<b>Project Title</b>  <b>Effects of Text Modifications on Reading Fluency Levels of Dyslexic Students</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives</b> This experiment was designed to see if modifications to text would help to increase the reading fluency levels of students with dyslexia or identified reading disabilities. The specific modifications tested in separate passages were text size, font, paper color and finally, a combination of all modifications applied to one passage. Fluency performance was compared to a control passage printed on white paper, in Times New Roman font, in text size 12.</p> <p><b>Methods</b> Participants were asked to read five passages. Each passage was timed for one minute. Mistakes were marked by the assessor. Number of words read were marked by assessor. The first passage was a control passage that was printed on white paper, in Times New Roman font, text size 12. Passage 2 was modified and printed in Comic Sans. Passage 3 was modified and printed in text size 16. Passage 4 was printed on blue paper. Passage 5 was modified and printed on blue paper, in text size 16, with Comic Sans font. I created my own testing booklets and assessment sheets for reading levels kindergarten-5th grade. Each testing booklet contained fluency reading passages that were modified in regards to font, text size, and paper color.</p> <p><b>Results</b> When testing modified passages against a control passage, fluency increased in both the passage with increased font size and the passage that contained all modifications combined. The average reading rate for the control was 73 words per minute. The average accuracy rate was 93%. The reading rate increased to 75 words per minute for the passage with larger font with a 94% accuracy rate. The passage with all modifications had an average reading rate of 79 words per minute and an accuracy rate of 93%.</p> <p><b>Conclusions</b> Larger font size appears to have a positive effect on reading fluency. Students' fluency levels increased when reading modified texts. This information could be used to help people with dyslexia read more fluently. I want to work on creating a tool that can be applied to online texts that allows readers to easily modify the text being read.</p>	
<b>Summary Statement</b>  I tested to see if reading fluency levels of people with dyslexia increased when reading texts that had modified in various ways.	
<b>Help Received</b>  I designed the experiment myself with support from my mother regarding reading levels. Two special education teachers used my materials to assess their students.	