



CALIFORNIA SCIENCE & ENGINEERING FAIR 2018 PROJECT SUMMARY

Name(s) Danna Bundogji	Project Number 38119
Project Title Is Technology Good for Us After All?	
Abstract Objectives/Goals The objective of this study was to assess the difference in reading comprehension of middle school students when using paper or digital reading sources. I also aimed to assess the role the environment plays on reading comprehension. Methods/Materials Middle School students were randomized into two groups: paper reading group vs. digital reading group. Group type determined which reading source the student read from during the experiment (for example: students in the paper reading group read from a paper while students in the digital reading group read from a tablet). Reading comprehension was also assessed by administering three exams under three different conditions: untimed, timed, and interrupted. Results Overall, the digital reading group did 1.43% than the paper reading group. The untimed experiment showed a 5.85% score increase in the paper reading group compared to the digital reading group. The timed experiment showed a 1.38% score increase in the paper reading group compared to the digital reading. Lastly, the interrupted experiment showed a 10.41% score decrease in the paper reading group compared to the digital reading group. Conclusions/Discussion My results demonstrated that there was an insignificant difference (1.06%) between reading comprehension scores of students in the on-screen and paper reading group. The testing condition affected reading comprehension scores in both groups showing a significant percent difference (un-timed: -5.85%; timed: -1.38%; interrupted: 10.41%). The environment seemed to play a larger role on reading comprehension than the reading source.	
Summary Statement Although reading source (paper vs. digital) did not play a significant role on reading comprehension scores of middle school students, the environmental condition had a substantial impact.	
Help Received I gathered materials, administered experiments, and collected data. My coach, Najwan Nasereldin, gave me constant feedback and support throughout my project.	