



CALIFORNIA SCIENCE & ENGINEERING FAIR 2018 PROJECT SUMMARY

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| Name(s) Danna Bundogji | Project Number J0707 |
| Project Title Is Technology Good for Us After All? | |
| <p style="text-align: center;">Abstract</p> <p>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.</p> <p>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.</p> <p>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 shoed a 10.41% score decrease in the paper reading group compared to the digital reading group.</p> <p>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.</p> | |
| 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 Naserelddin, gave me constant feedback and support throughout my project. | |