



# CALIFORNIA STATE SCIENCE FAIR 2014 PROJECT SUMMARY

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<b>Project Title</b> <b>The Effects of Digital Based Learning and Traditional Based Learning on Reading Interpretation</b>	
<b>Abstract</b> <b>Objectives/Goals</b> This experiment is designed to investigate the effects of a digitally based learning environment and a traditional based learning environment on reading interpretation using an ACT# Prose Fiction reading test. <b>Methods/Materials</b> The traditional (n=15) and digital (n=9) groups consisted of 24 predominantly Caucasian, native English speaking, high school students between the ages of 16-18, currently enrolled in a college preparatory psychology class. Students attend either a digital or traditional school and both are from a rural mountain area in Central California. Participants were obtained as part of a purposive sample because of certain characteristics that were required between the control and experimental group participants. In the first test, a traditional (paper) version was administered to the students in a traditionally based learning environment. In the second test, an online version was presented to the students enrolled in a digitally based learning environment. The independent variable was the digital or traditional learning environment, and the dependent variable was the score received on the reading tests. <b>Results</b> A one tailed t-test demonstrated that there was a significant difference at the $p < 0.005$ level, which shows traditional based learning has a positive impact on ACT# Prose Fiction reading test scores. <b>Conclusions/Discussion</b> In conclusion, the data collected resulted in supporting the research hypothesis. Therefore, an individual studying at a traditional based learning school is more likely to score higher on a reading interpretation test than an individual studying at a digital based learning school.	
<b>Summary Statement</b> This experiment is designed to investigate the effects of a digitally based learning environment and a traditional based learning environment on reading interpretation using an ACT# Prose Fiction reading test.	
<b>Help Received</b> Received help in learning how to use/operate Photoshop for the production of the poster board, and IB instructor help	