



**CALIFORNIA SCIENCE & ENGINEERING FAIR
2018 PROJECT SUMMARY**

Name(s) Ananya Vinay	Project Number J0427
Project Title Testing Effectiveness of Computer Based Study vs. Traditional Methods: Are You Being a Neo-Luddite?	
Abstract Objectives/Goals The objective was to compare the effectiveness of traditional methods and computer-based methods in the age group 11-14 and see which is more effective. Methods/Materials 30 vocabulary words with definitions printed on paper, 30 vocabulary words uploaded into website-"Quizlet", cellphone timer, laptop. Recall tested after 30 minutes of studying. Results The average score for each group was determined. The average recall score for the typing group was 14.48. The average recall group for the writing group was 13.65. The p-value was 0.53. This shows that there was no significant difference between the rate of recall in the 2 groups. This proves that both methods are comparable. Also since each subject crossed over two different methods of study, the test was not confounded by baseline knowledge or vocabulary level or inherent ability. A subgroup analysis was conducted by dividing the subjects by grade level and gender. The students were divided into two groups: grade 6-7 and grade 8-9. The difference in both groups were analyzed using t-test. There was no difference in delta (change of score) between typing and writing when subgroup analysis was done by gender/age. This further strengthens the proposition that typing and writing are at least equally effective for recall. Conclusions/Discussion The results of this study were different from the earlier studies, which showed that writing was better. However these studies were done on older students born between 1970 - 1990. Writing was emphasized more and students were more comfortable with writing and had good handwriting speed. This is probably very important for feature classroom study design and learning as a near generation is more comfortable with computers and typing. This can be extended into study subjects like science, history, and geography which involves more analytical thinking especially when couple with visual and audio aids and see what is more effective. Current generation is more comfortable with typing than writing. It is important to update didactic methods to keep with these changes.	
Summary Statement My study concluded that computer based study methods are at least as effective as traditional paper based methods for the age group 11-14. There was no significant difference between recall rate between either group.	
Help Received NA	