



**CALIFORNIA STATE SCIENCE FAIR  
2017 PROJECT SUMMARY**

<b>Name(s)</b> <b>Lane G. Karlitz</b>	<b>Project Number</b> <b>S0410</b>
<b>Project Title</b> <b>Does Study Senses Improve Memory in Educationally Disadvantaged Adults?</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> The objective of this project was to see if there is a relationship between my mnemonic mobile application, Study Senses, and the improvement of memorization in educationally disadvantaged adults. Would educationally disadvantaged adults benefit from using Study Senses more or less than the standard population of adults? I hypothesized that using Study Senses will improve memorization accuracy in educationally disadvantaged adults, but the improvement rate would be lower that that of adults whom are not educationally disadvantaged.</p> <p><b>Methods/Materials</b> Residents (18 - 22) at the Covenant House California, using a within-sample design, were tested on memorization accuracy. Three experimental treatments were: 1) A recording of spoken word. 2) A recording of a study song to a tune that may not be familiar. 3) The Study Senses mnemonic mobile application to select a study song. Immediately after listening to all three recordings, the participants were asked to complete a survey about the terms in the recordings to test their memory.</p> <p><b>Results</b> After reviewing my results, I found that my hypothesis was supported. Using my Study Senses application will improve memory accuracy in educationally disadvantaged adults, but the rate of improvement would be lower than that of adults whom are not educationally disadvantaged. My 2017 research, surveying educationally disadvantaged adults in residence at the Covenant House California, proved that using Study Senses improved memorization of study terms by 6% in comparison to the memorization of study terms without using Study Senses. The memorization improvement rate from Study Senses is 11% less in the educationally disadvantaged adult population than a standard adult population.</p> <p><b>Conclusions/Discussion</b> I have gained a better understanding how music and technology together, specifically using Study Senses, improves memorization accuracy with educationally disadvantaged adults. I will continue my research by investigating how Study Senses can benefit the senior population over the age of 75 residing in an assisted living homes or senior living homes.</p>	
<b>Summary Statement</b> My mnemonic mobile application, Study Senses, improves memorization accuracy in a population of educationally disadvantaged adults.	
<b>Help Received</b> Dr. Jessica Postil, Executive Director of Autism Consultants	