



**CALIFORNIA STATE SCIENCE FAIR
2013 PROJECT SUMMARY**

Name(s) Noah M. Fields	Project Number S0493
Project Title Growth Mindset As a Catalyst for Personal Happiness	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals In my project last year, I found a significant positive correlation between a growth mindset (here defined as perceiving intelligence as a changeable attribute, contrasted by a fixed mindset, which sees intelligence as set in stone) with personal happiness through survey data ($t_{99}=2.652, p=.009$). But correlation does not imply causation. The present study utilizes experimental design to explore whether a mindset intervention change would catalyze a change in personal happiness.</p> <p>Methods/Materials I created two intervention programs to encourage a growth mindset. The first was a Lecture treatment ($n=33$), in which I spoke to subjects about both types of mindsets and their respective advantages and disadvantages in order to raise cognizance of the subject's own mindset. The second was a Growth Journal treatment ($n=20$), in which subjects, after a lecture, wrote journal entries about recent experiences of growth in order to help subjects ingrain the habit of thinking in a growth mindset. A third group of subjects served as control ($n=11$) and received no treatment. The effectiveness of each intervention program was evaluated through anonymous pre- and post- experimental surveys about mindset and happiness.</p> <p>Results Both of the intervention programs proved effective in changing students' mindset (Lecture Group: $t_{32}=3.373, p=.002$, Journal Group: $t_{19}=4.744, p<.001$) while control group did not ($t_{10}=2.10, p=.062$, n.s.). However, no treatment succeeded in increasing personal happiness significantly (Lecture Group: $t_{32}=-.308, p=.760$, Journal Group: $t_{19}=1.244, p=.198$). Furthermore, One-way ANOVA analyses by intervention (including control) revealed no significant differences by treatment in catalyzing positive change in either mindset or happiness. In addition, a correlational analysis of change in mindset and happiness composite scores revealed no significant correlation ($r_{61}=-.151, p=.239$).</p> <p>Conclusions/Discussion To conclude, the intervention programs, particularly the Growth Journal Exercise, were successful in ingraining a growth mindset. This adaptation was not accompanied by a significant shift in happiness. Nonetheless, a growth mindset is a valuable tool in life, so a successful mindset intervention program like mine is imperative.</p>	
Summary Statement I found that while there is a significant positive correlation between growth mindset and happiness, successful mindset intervention programs, such as a Growth Journal exercise, caused no corresponding shift in happiness.	
Help Received Dr. Nikki Malhotra provided feedback and guidance from conception to presentation; Dr. Gary Katz of CSUN helped me interpret my data using SPSS. However, all of my research and report was ultimately done solely by me.	