CALIFORNIA STATE SCIENCE FAIR
2016 PROJECT SUMMARY

Name(s)
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Project Number
36010

Project Title
The Effect of Emotion on Memory

Abstract

Objectives/Goals
The objective was to examine how different emotions influence memory; after some research, it became clear that joy and sadness would prove quite influential in assessing memory retention. The experiment designed tested how emotion effects memory . The testing explored the interaction of emotions and the key role they play on retaining human memories. The experiment also established a common link of affect between different age groups so as to prove memory capacity is not just age related.

Methods/Materials
Subjects were asked to memorize a list of words%numbers and watch two videos. The subjects were then asked to write down memorized words and numbers. A research group covered 3 age groups. Each participant completed multiple exercises in order to elicit data during different emotional states. It was necessary to break the data collection results into two (2) specific emotional states:Joy and Sadness. The test group yielded 70-100 results as each participant conducted independent data production in multiple emotional states.

Results
Data collection supports the following statistics: Young people 9-14 when happy preformed at 56% efficiency rate and when sad preformed at a 20% efficiency level thereby dropping efficiency by 36%;Young adults 20-26 when happy preformed at an 88% efficiency rate and when sad preformed at a 46% efficiency level thereby dropping efficiency by 42%; Mid-life adults when happy preformed at a 64% efficiency rate and when sad preformed at a 29% efficiency thereby dropping efficiency by 35%.

Conclusions/Discussion
The conclusion from this expansive data and research is that when any age group experiences intense emotional sadness/compassion it proves a distraction to efficiency and creates an effect of lower route memorization production within an individual's brain. In other words when we are free from stress and worry our brain is free to function in a more efficient manner when it comes to day to day tasks. Given the complexity of the human brain as well as the stressful fast paced world of todays students, teachers, workers and families it would do us all a world of good to note we must work towards creating an environment rich in rewards and joy in order to maintain or brain's health both in the short term or for a more lasting and memorable life.

Summary Statement
I tested the effect strong emotions (joy/sadness) have on the brain's ability to remember data and concluded that memory is better in a joyous state than when less pleasurable emotions such as sadness are present,

Help Received
None, I reviewed/refined the video clips myself, administered the testing and tabulated the results. I would note that the inspiration was the result of many life influences.