

CALIFORNIA STATE SCIENCE FAIR 2003 PROJECT SUMMARY

Name(s)

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Project Number

J0327

Project Title

Memory: Can It Be Affected by My "Attitude"?

Abstract

Objectives/Goals

My objective is to scientifically determine that I can influence short-term memory retention by telling the subjects that I either love or hate my project. My project explores the subtle influence that positive and negative attitudes can have on short-term memory.

Methods/Materials

I showed 60 people (each individually) the same 10 unrelated four-letter nouns after which they had one minute to write down the words they remembered. I gave them instructions on what to do without giving an opinion of my project. One third of those subjects were designated as being in the control group, one third as the "negative influence" group and one third as the "positive influence" group. All the subjects were 6th to 9th grade. After showing the first word group, I showed each subject another group of 10 words. However, before showing the words to the people in the "negative influence" group, I gave them negative information about my project by telling them how I hated my project and didn't want to do it. Before showing the words to the people in the "positive influence" group, I gave them positive information and told them how much I loved my project and enjoyed doing it. To the people in the control group, I again gave the same neutral, unbiased instructions as I did when I administered the first word group to everyone. I scripted each experiment so that each person was told the exact same thing as every other person in their experiment group. I practiced the script and memorized it with the same voice inflection and emotion in order to minimize the variables.

Results

The control group, which was given the same neutral instructions both times, remembered exactly the same number of words on both word group tests. The "negative influence" group remembered fewer words after I told them that I hated my project than when I simply gave them instructions on what to do. The "positive influence" group remembered more words after I told them that I loved my project than they did when I just gave instructions on what to do.

Conclusions/Discussion

My hypothesis was correct. My attitude can positively or negatively affect how many words a person can remember in short-term memory. I was able to influence my subjects to remember more or less words by making my project seem more or less worthwhile.

Summary Statement

My project determines that attitude can positively or negatively influence short -term memory.

Help Received

My mother bought the materials for the board and some of the books that I used for research.