CALIFORNIA STATE SCIENCE FAIR
2016 PROJECT SUMMARY

Name(s)
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Project Number
36752

Project Title
The Effect of Age on Human Thinking Processes

Abstract

Objectives/Goals
This project studies the distribution and differences in exhibition of inherence heuristic amongst different age groups: children, adolescents, and adults. Inherence heuristic is a human behavior where individuals rely on inherent features of objects and patterns to try to explain them. The objective of this project is to see whether there is a difference between the three groups and age is a factor in the display of this behavior.

Methods/Materials
Recording Device, images of babies taken from internet. Ask for age and ask seven open-ended questions with recording device turned on. Baby images part of question 1.

Results
Inherence heuristic is not evenly split between the three groups with 99.998% probability, calculated using a chi-squared test. Teachers exhibited the least instances of inherence heuristic, followed by students and then preschoolers. The high school students were closer in relative instances of heuristic to the teachers than to the preschoolers. Distribution and differences were found, and the objective was met.

Conclusions/Discussion
Inherence heuristic was unevenly distributed between the three groups, leading me to conclude that age is a factor in the display of heuristic and that as people grow older, they adjust their paradigm to include generally accepted explanations for complex patterns and ideas. I found that inherence heuristic can serve as another metric by which to measure cognitive development and current thinking level of individuals due to its age dependence.

Summary Statement
I found that inherence heuristic, a thinking process that defines objects by their inherent features, was non-homogeneously distributed between three age groups and therefore could be used as a tool to measure cognitive development.

Help Received
I made the questionnaire myself. I used help from Mr. Troy Thiele of the Harker School's Math Department for statistical analysis. I used the help of my mentor, Mrs. Kelly Horan from The Harker School's Science Department, to discuss some results.